

LBT-D590/XB4

SERVICE MANUAL

US Model
Canadian Model

LBT-D590

E Model
Australian Model
PX Model

LBT-XB4

- LBT-D590/XB4 are composed following models.
As for the service manual, it is issued for each component model,
then, please refer to it.

COMPONENTS MODEL NAME FOR LBT-D590/XB4

	LBT-D590	LBT-XB4
COMPACT DISC DECK RECEIVER SYSTEM	HCD-D590	HCD-XB4
SPEAKER SYSTEM		SS-XB4V(E, Argentine, Mexican, Australian, PX)

SPECIFICATIONS

General

Power requirements

US, Canadian models:

120V AC, 60Hz

Mexican model:

120V AC, 50 /60Hz

Australian model:

220-240 AC, 50 /60Hz

Other models:

110-120V or 220-240V AC

50 /60Hz adjustable with the voltage selector.

Power consumption

US, Canadian models: 170W

Other models: 140W

Supplied accessories

AM loop aerial (1)

Remote RM-SD70 (1)

Sony SUM-3 (NS) batteries (2)

FM wire antenna (1)

Design and specifications are subject to change without notice.

COMPACT Hi-Fi STEREO SYSTEM



SONY®

PARTS LIST

NOTE:

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Abbreviation
CND : Canadian model
MX : Mexican model
AR : Argentine model

<u>Part. No.</u>	<u>Description</u>
------------------	--------------------

ACCESSORIES & PACKING MATERIALS

1-501-374-11	ANTENNA, LOOP
1-501-659-41	ANTENNA (FM)
3-859-536-11	MANUAL, INSTRUCTION (ENGLISH)
3-859-536-21	MANUAL, INSTRUCTION (FRENCH) (CND)
3-859-536-31	MANUAL, INSTRUCTION (FRENCH, SPANISH) (E, AR, MX, PX)
3-859-536-41	MANUAL, INSTRUCTION (CHINESE) (PX)
4-979-371-01	COVER, BATTERY (for RM-SD70)
8-917-581-90	REMOTE COMMANDER (RM-SD70)

HCD-D590/XB4

SERVICE MANUAL

US Model
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HCD-D590

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HCD-XB4



Photo: HCD-D590

HCD-D590, HCD-XB4 is the tuner, deck,
CD and amplifier section in LBT-D590,
LBT-XB4.

CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM37L-5BD29AL
	Base Unit Name	BU-5BD29AL
	Optical Pick-up Name	KSS-213D/Q-NP
Tape deck Section	Model Name Using Similar Mechanism	HCD-H881
	Tape Transport Mechanism Type	TCM-220WR2

SPECIFICATIONS

For the U.S. model

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8 ohm loads, both channels driven, from 70-20,000 Hz; rated 100 watts per channel minimum RMS power, with no more than 0.9 % total harmonic distortion from 250 milliwatts to rated output.

Amplifier section

Continuous RMS power output
(HCD-D590)

Canadian model: 100+100 watts
(8 ohms at 1 kHz, 5%)
(HCD-XB4) 80+80 watts
(5 ohms at 1kHz, 10% THD)

Peak music power output
(HCD-XB4)

1200 watts

Inputs

PHONO IN (phono jack): sensitivity 3 mV, impedance 47 kilohms

VIDEO (AUDIO) IN (phono jack): sensitivity 250 mV, impedance 47 kilohms

MIX MIC (phono jack): sensitivity 1 mV, impedance 10 kilohms

Outputs

PHONES (stereo phone jack): accepts headphones of 8 ohms or more

SPEAKER:

(HCD-D590) accepts impedance of 8 to 16 ohms.

(HCD-XB4) accepts impedance of 5 to 16 ohms.

SURROUND SPEAKER:

(HCD-D590) accepts impedance of 16 ohms.

— Continued on next page —

COMPACT DISC DECK RECEIVER



SONY®

CD player section

System	compact disc and digital audio system
Laser	Semiconductor laser ($\lambda = 780\text{nm}$). Emission duration: continuous
Laser output	Max. $44.6\mu\text{F}^*$ *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up block with 7 mm aperture.
Wavelength	780 - 790 nm
Frequency response	2 Hz - 20 kHz (± 0.5 dB)
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB

Tape player section

Recording system	4-track 2-channel stereo
Frequency response (DOLBY NR OFF)	60 - 13,000 Hz (± 3 dB), using a Sony TYPE I cassette 60 - 14,000 Hz (± 3 dB), using a Sony TYPE II cassette
Wow and flutter	$\pm 0.15\%$ W. Peak (IEC) 0.1% W. RMS (NAB) $\pm 0.2\%$ W. Peak (DIN)

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	
(HCD-D590):	87.5 - 108.0 MHz (100kHz) step
(HCD-XB4):	87.5 - 108.0 MHz (50kHz) step
Antenna	FM wire antenna
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range	
(HCD-D590):	530 - 1,710 KHz (with the tuning interval set at 10 kHz) 531 - 1,710 KHz (with the tuning interval set at 9 kHz)
(HCD-XB4):	531 - 1,602 kHz (with the tuning interval set at 9 kHz) 530 - 1,710 KHz (with the tuning interval set at 10 kHz)
Antenna	AM loop antenna, External antenna terminals
Intermediate frequency	450 kHz

General

Power requirements	
US, Canadian models:	120 V AC, 60 Hz
Mexican model:	120 V AC, 50/60 Hz
Australian model:	220 - 240 V AC, 50/60 Hz
Other models:	110 - 120 V or 220 - 240V AC, 50/60 Hz Adjustable with voltage selector
Power consumption	
(HCD-D590)	198 watts
(HCD-XB4)	165 watts
Dimensions (w/h/d)	Approx. 355 x 425 x 435 mm (14 x 16 3/4 x 17 1/4 in) incl. projecting parts and controls
Mass	
(LBT-D590)	Approx. 12.3 kg (27 lb 2 oz.)
(LBT-XB4)	Approx. 11.5 kg (25 lb 6 oz.)
Supplied accessories:	AM loop antenna (1) Remote RM-SD70 (1) Sony SUM-3 (NS) batteries (2) FM wire antenna (1) Speaker cords (2)

Design and specifications are subject to change without notice.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

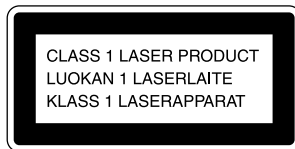
Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.


This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.





Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

The following caution label is located inside the unit.

CAUTION	;	INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL	;	USYNLIG LASERSTRÅLING VED ÅBNING NÅR Sikkerhedsafbrydere er ude af funktion. UNDGA UDSÆTTELSE FOR STRÅLING.
VARO!	;	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTIINA LASERISÄTELYLLE.
VARNING	;	LASERSTRÅLING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URÖPPNAD.
ADVARSEL	;	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN.

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“DOLBY” and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage.

Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes.). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

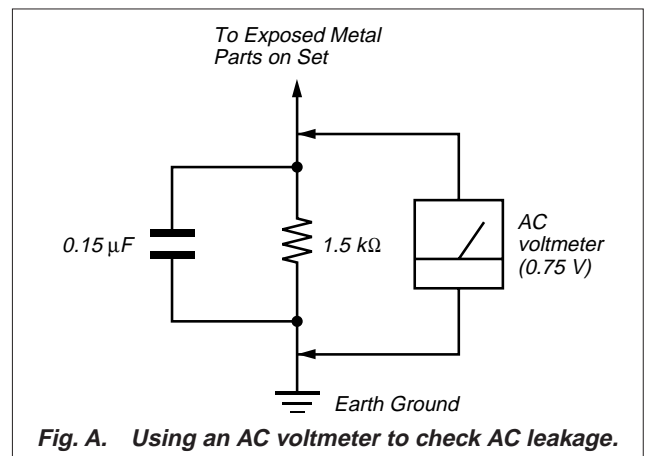


Fig. A. Using an AC voltmeter to check AC leakage.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!


LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

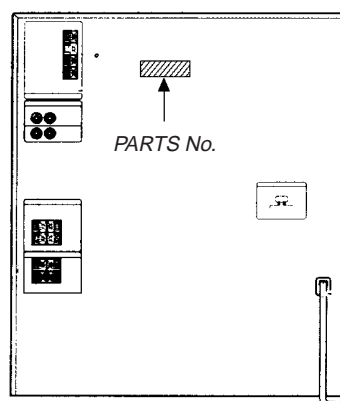
The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts. The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

MODEL IDENTIFICATION

– BACK PANEL –

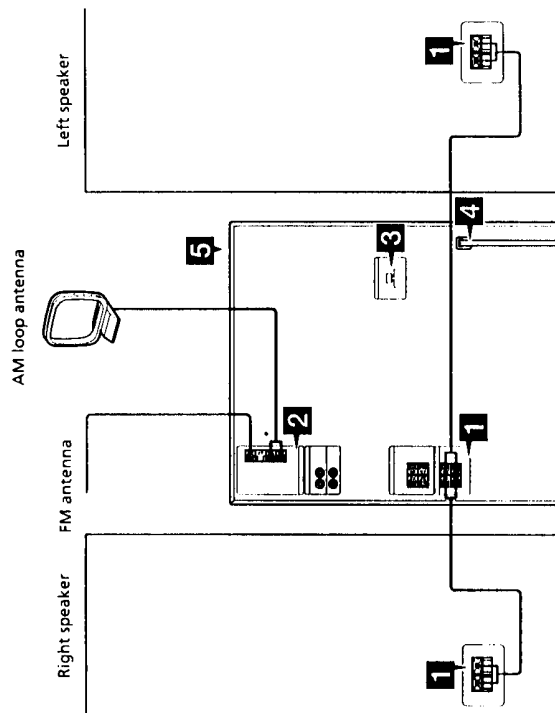


MODEL	PARTS No.
D590: US model	4-987-043-7□
D590: Canadian model	4-987-043-8□
XB4	4-987-927-0□

Getting Started

Step 1: Hooking up the system

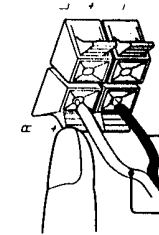
Follow steps 1 through 5 to hook up your system using the supplied cords and accessories.



The above illustration is of the LBT-XB6K.

1 Connect the speakers.

- 1 Connect the speaker cords to SPEAKER jacks of the same color. Keep the speaker cords away from the antennas to prevent noise.



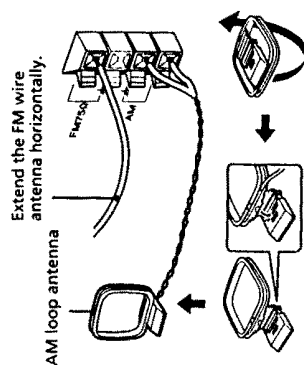
Red (R) Black (B)

- 2 Insert only the stripped portion of the cord. Inserting the vinyl portion will interfere with the speaker connection and no sound will come from the speaker.

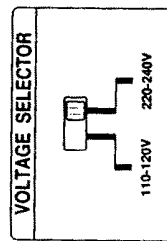
Note

The speakers for LBT-D290/G3300/NB3/NB3K do not have the speaker jacks. Connect the speaker cords to the speaker jacks on the unit.

- 2 Connect the FM/AM antennas. Set up the AM loop antenna, then connect it.



- 3 Set VOLTAGE SELECTOR to the position of your local power line voltage (except for North American, Malaysian, Mexican, and Australian models).



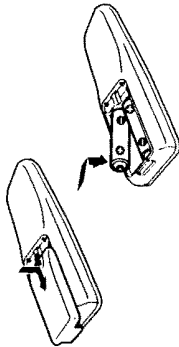
- 4 Connect the power cord to a wall outlet.

The demonstration appears in the display.

If the plug on this unit does not fit your wall outlet, detach the supplied adapter from the plug (except for North and South American countries, Australia, and Malaysia).

- 5 Deactivate the demonstration mode by pressing DISPLAY/DEMO while the system power is off.

Inserting two size AA (R6) batteries into the remote



Tips

- With normal use, the batteries should last for about six months. When the remote no longer operates the system, replace both batteries with new ones.
- When you set the time, the demonstration is deactivated.

To activate the demonstration again, press DISPLAY/DEMO while the system power is off.

Note

If you do not use the remote for a long period of time, remove the batteries to avoid possible damage from battery leakage.

When carrying this system

Do the following to protect the CD mechanism.

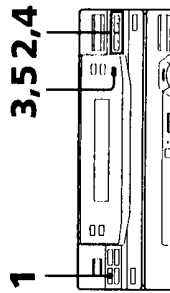
- 1 Press FUNCTION repeatedly until "CD" appears in the display.
- 2 Hold down PLAY/MODE and press POWER to turn off the power.

SECTION 1 GENERAL

This section is extracted from instruction manual.

Step 2: Setting the time

You must set the time before using the timer functions.



LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K only

- 1 Press **⊙/CLOCK SET**.
The hour indication flashes.



- 2 Press **TUNING +/-** to set the hour.
The clock uses the 12-hour system.



- 3 Press **ENTER/NEXT**.
The minutes indication flashes.



- 4 Press **TUNING +/-** to set the minutes.



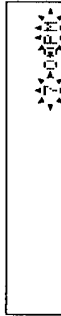
- 5 Press **ENTER/NEXT**.
The clock starts.

LBT-D690/XB600/XB6/XB6K only

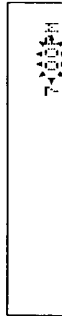
- 1 Press **⊙/CLOCK SET**.
The hour indication flashes.



- 2 Press **TUNING +/-** to set the hour.
The clock uses the 12-hour system.



- 3 Press **ENTER/NEXT**.
The minutes indication flashes.



- 4 Press **TUNING +/-** to set the minutes.

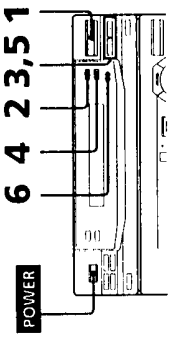


- 5 Press **ENTER/NEXT**.
The clock starts.

Tip
If you make a mistake, start over from step 1.

Step 3: Presetting radio stations

You can preset up to 30 stations, 20 for FM and 10 for AM.



- 1 Press **TUNER/BAND** repeatedly until the band you want appears in the display.

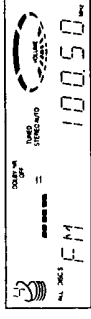
Each time you press this button, the band changes as follows:
FM ↔ AM

- 2 Press **TUNING MODE** repeatedly until "AUTO" appears in the display.

- 3 Press **TUNING +/-**.

The frequency indication changes and scanning stops when the system tunes in a station. "TUNED" and "STEREO" (for a stereo program) appear.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K

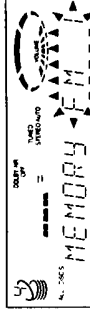


LBT-D690/XB600/XB6/XB6K



- 4 Press **TUNER MEMORY**.
A preset number flashes in the display.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K

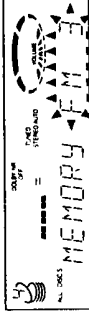


LBT-D690/XB600/XB6/XB6K



- 5 Press **TUNING +/-** to select the preset number you want.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K



LBT-D690/XB600/XB6/XB6K



- 6 Press **ENTER/NEXT**.
The station is stored.

- 7 Repeat steps 1 through 6 to store other stations.

To tune in a station with a weak signal

Press **TUNING MODE** repeatedly until "MANUAL" appears in step 2, then press **TUNING +/-** to tune in the station.

To change the preset number

Start over from step 1.

To change the AM tuning interval (Except for the Middle Eastern model)

The AM tuning interval is factory-preset to 9 kHz (10 kHz in some areas). To change the AM tuning interval to 10 kHz (or 9 kHz), tune in any AM station first, then turn off the power. While holding down **ENTER/NEXT**, turn the power back on.

When you change the interval, the AM preset stations will be erased. To reset the interval, repeat the same procedure.

Note

The preset stations are canceled when you disconnect the power cord or if a power failure occurs for half a day.

Connecting optional AV components

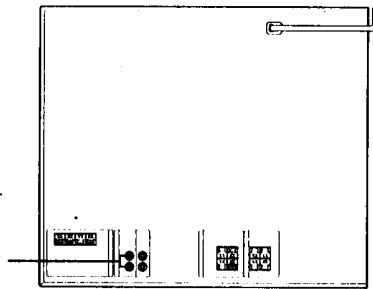
To enhance your system, you can connect optional components. Refer to the instructions included with each component for details.

Connecting audio components

Connecting a turntable

Be sure to match the color of the plugs and the connectors. To listen to the sound from the connected turntable, press FUNCTION repeatedly until "PHONO" appears.

To the audio output of the turntable



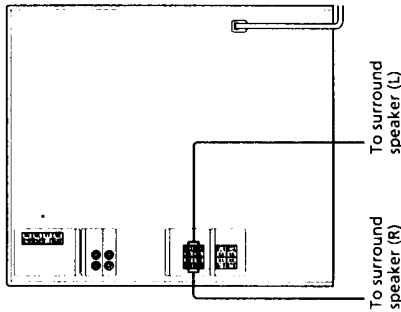
Note

Using the turntable at high volume may cause distortion or howling. This is often caused by the bass sound from the speakers. The bass sound may be picked up by the needle of the turntable, and produce the distortion or howling. To avoid this, do the following:

- 1 Keep some distance between the speakers and the turntable.
- 2 Stop using the surround effect.
- 3 Install the speakers or the turntable on a firm and stable surface.
- 4 Press DBFB repeatedly until "DBFB" appears from the display (LBT-D290/G3300/XB3/XB3K only). Press SLUPER WOOFER repeatedly until the indicator on this button goes off (except for LBT-D290/G3300/XB3/XB3K).

Connecting surround speakers (LBT-D590/D690/XB600/XB6/XB6K only)

You can connect optional surround speakers.



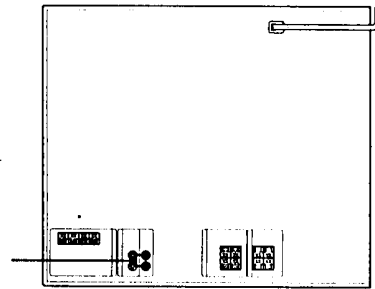
Note

You need to connect both left and right surround speakers. Otherwise, the sound will not be heard.

Connecting a VCR

Be sure to match the color of the plugs and the connectors. To listen to the sound from the connected VCR, press FUNCTION repeatedly until "VIDEO" appears.

To the audio output of the VCR

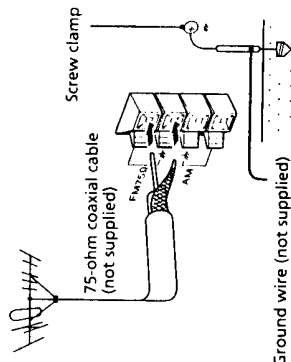


Connecting outdoor antennas

Connect an outdoor antenna to improve the reception.

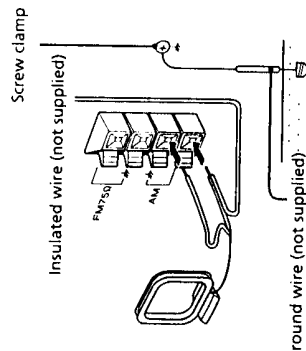
FM antenna

Connect an optional FM outdoor antenna. You can also use the TV antenna instead.



AM antenna

Connect a 6 to 15 meter (20 to 50 feet) insulated wire to the AM antenna terminal. Leave the supplied AM loop antenna connected.



Important

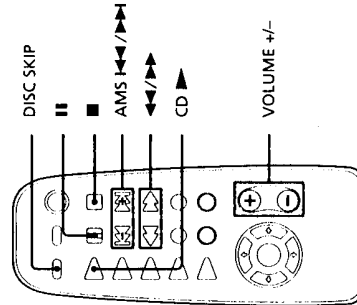
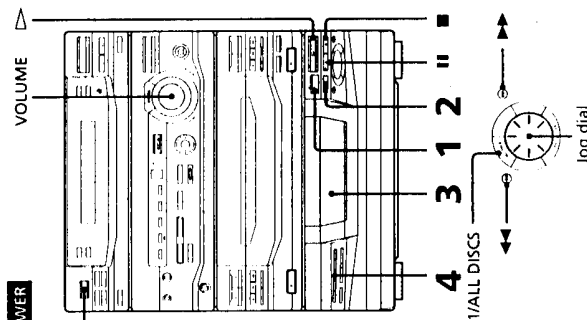
If you connect an outdoor antenna, connect a ground wire to the # terminal with the screw clamp. To prevent a gas explosion, do not connect the ground wire to a gas pipe.

Basic Operations

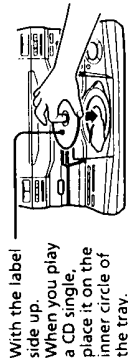
Playing a CD

— Normal Play

You can play up to five CDs in a row.



- 1 Press **▶ OPEN** and place a CD on the disc tray. If the disc is not placed properly it will not be recognized.



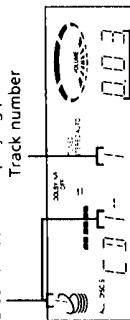
- 2 Press **DISC SKIP** to place up to four more CDs on the tray. The disc tray rotates so you can insert other CDs.

- 3 Close the front cover.

- 4 Press one of the **DIRECT PLAY** buttons.

Playback starts. If you press **▶** (or **CD ▶** on the remote), playback starts from the CD in the playing position.

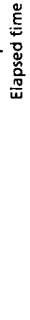
LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K
Disc number in the playing position



LBT-D690/XB600/XB6/XB6K
Disc number in the playing position



Elapsed time



Basic Operations

To	Do this
Stop playback	Press ■ .
Pause	Press ■ . Press again to resume playback.
Select a track	During playback or pause, turn the jog dial clockwise (to go forward) or counterclockwise (to go backward) and release it when you reach the desired track. Or press AMS ▶▶▶ (to go forward) or AMS ◀◀◀ (to go backward) on the remote.
Find a point in a track	Press and hold ▶▶▶ or ◀◀◀ during playback, and release at the desired point.
Select a CD	Press one of the DIRECT PLAY buttons (or DISC SKIP).
Play only the CD you have selected	Press 1 / ALL DISCS repeatedly until "1 DISC" appears.
Play all CDs	Press 1 / ALL DISCS repeatedly until "ALL DISCS" appears.
Remove or change the CDs	Press ▶ OPEN .
Adjust the volume	Turn VOLUME (or press VOLUME +/- on the remote).

* AMS: Automatic Music Sensor.

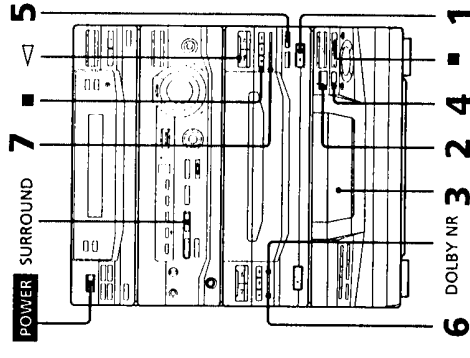
Tips

- Pressing **▶** while the power is off automatically turns the power on and starts CD playback if there is a CD on the tray (One Touch Play).
- You can switch from another source to the CD player and start playing a CD just by pressing **▶** or one of the **DIRECT PLAY** buttons (Automatic Source Selection).
- If there is no CD in the player, "NO DISC" appears in the display.
- You can change the CD in the loading position during playback.

Recording a CD

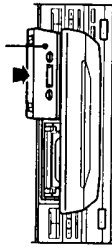
— CD Synchro Recording

This function lets you record from a CD to a tape easily. You can use TYPE I (normal) or TYPE II (CrO₂) tapes. The recording level is adjusted automatically.

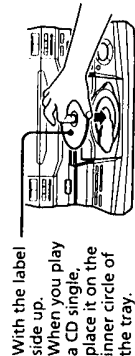


- 1 Press **EJECT** and insert a blank tape into deck B.

With the side you want to record on facing forward



- 2 Press **OPEN** and place a CD.



- 3 Close the front cover.

- 4 Press **DISC SKIP** repeatedly until the disc number you want to record appears in the playing position indicator.

- 5 Press **CD SYNC**.

Deck B stands by for recording and the CD player stands by for playback, and the indicator on the **▷** button (for the front side) lights up.

- 6 Press **DIRECTION** repeatedly to select **◀** to record on one side, or select **▶** (or **RELAY**) to record on both sides.

- 7 Press **II** on deck B. Recording starts.

To stop recording

Press **■** on deck B or on the CD player.

Tips

- If you want to record on the reverse side, press **◀** so the indicator on the **◀** button (for the reverse side) lights up.
- When you record on both sides, be sure to start from the front side. If you start from the reverse side, recording stops at the end of the reverse side.
- When you want to reduce the hiss noise in low-level high-frequency signals, press **DOLBY NR** before step 7 so "DOLBY NR B" appears in the display.
- To record with the surround effect, press **SURROUND** so "SUR (|||||)" appears in the display. The equalizer settings will not be recorded.

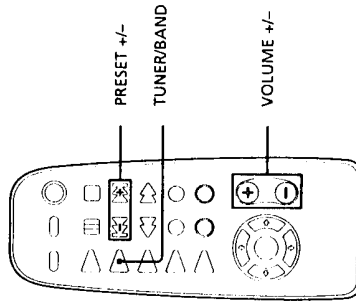
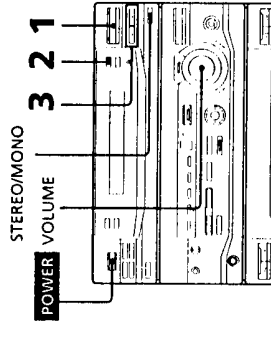
Note

You cannot listen to other sources while recording.

Listening to the radio

— Preset Tuning

Before using this function, preset radio stations in the tuner's memory (see "Step 3: Presetting radio stations").



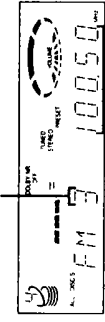
- 1 Press **TUNER/BAND** repeatedly until the band you want appears in the display.

Each time you press this button, the band changes as follows:
FM \leftrightarrow AM

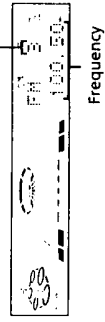
- 2 Press **TUNING MODE** repeatedly until "PRESET" appears in the display.
MANUAL \rightarrow AUTO \rightarrow PRESET

- 3 Press **TUNING +/-** (or **PRESET +/-** on the remote) to tune in the desired preset station.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K
Preset number



LBT-D690/XB600/XB6/XB6K
Preset number



Basic Operations

To	Do this
Turn off the radio	Press POWER .
Adjust the volume	Turn VOLUME (or press VOLUME +/- on the remote).

To listen to non-preset radio stations

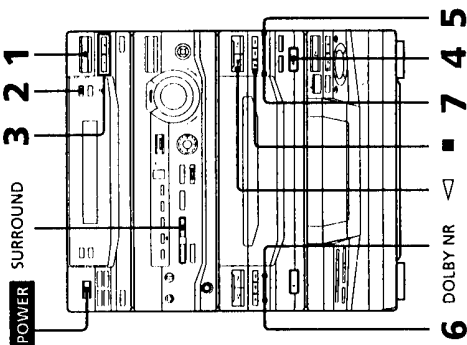
Press **TUNING MODE** repeatedly in step 2 until "MANUAL" appears, then press **TUNING +/-** to tune in the desired station.

Tips

- Pressing **TUNER/BAND** while the power is off automatically turns on the power and tunes to the last received station (One Touch Play).
- You can switch from another source to the radio just by pressing **TUNER/BAND** (Automatic Source Selection).
- If an FM program is noisy, press **STEREO/MONO** so "MONO" appears in the display. There will be no stereo effect, but the reception will improve. Press this button again to restore the stereo effect.
- To improve broadcast reception, move the supplied antennas.

Recording from the radio

You can record a radio program on a tape by tuning in a preset station. You can use TYPE I (normal) or TYPE II (CrO₂) tapes. The recording level is automatically adjusted.



- 1 Press TUNER/BAND repeatedly until the band you want appears in the display.
- 2 Press TUNING MODE repeatedly until "PRESET" appears in the display.

- 3 Press TUNING +/- to tune in a preset station.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K
Preset number

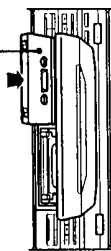


LBT-D690/XB600/XB6/XB6K
Frequency



- 4 Press EJECT and insert a blank tape into deck B.

With the side you want to record on facing forward



- 5 Press REC. Deck B stands by for recording, and the indicator on the button (for the front side) lights up.
- 6 Press DIRECTION repeatedly to select to record on one side, or select (or RELAY) to record on both sides.
- 7 Press II on deck B. Recording starts.

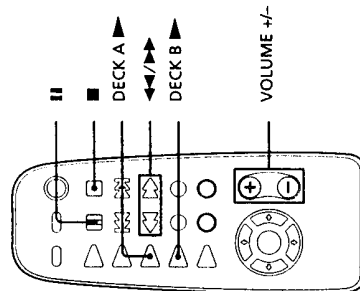
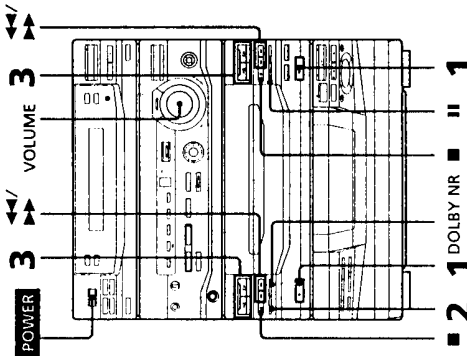
To stop recording
Press ■ on deck B.

Tips

- If you want to record on the reverse side, press so the indicator on the button (for the reverse side) lights up.
- When you record on both sides, be sure to start from the front side. If you start from the reverse side, recording stops at the end of the reverse side.
- To record non-preset stations, select "MANUAL" in step 2, then press TUNING +/- to tune in the desired station.
- When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR before step 7 so "DOLBY NR B" appears in the display.
- To record with surround effect, press SURROUND so "SUR (II)" appears in the display. The equalizer settings will not be recorded.
- If noise is heard while recording from the radio, move the appropriate antenna to reduce the noise.

Playing a tape

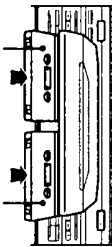
You can play any type of tape, TYPE I (normal), TYPE II (CrO₂) or TYPE IV (metal). The deck automatically detects the tape type. To select either deck A or B, press DECK A or DECK B on the remote.



Playing a Tape (continued)

- 1 Press **EJECT** and insert a recorded tape in deck A or B.

With the side you want to play facing forward



- 2 Press **DIRECTION** repeatedly to select **==** to play one side, **↔** to play both sides, or **RELAY** (Relay Play)** to play both decks in succession.

- 3 Press **▷**.

Press **◁** to play the reverse side. The tape starts playing.

* The deck stops automatically after playing both sides five times.

** Relay Play always plays according to the following sequence:

Deck A (front side), Deck A (reverse side), Deck B (front side), Deck B (reverse side).

To	Do this
Stop play	Press ■ .
Pause (Deck B only)	Press II . Press again to resume play.
Fast-forward	Press ▶▶ while playing the front side or ◀◀ while playing the reverse side.
Rewind	Press ◀◀ while playing the front side or ▶▶ while playing the reverse side.
Remove the cassette	Press EJECT .
Adjust the volume	Turn VOLUME (or press VOLUME +/- on the remote).

Tips

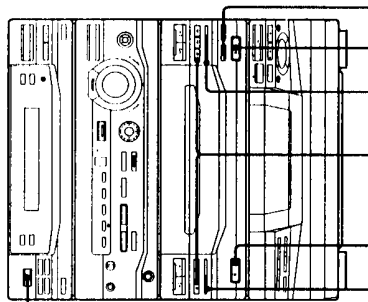
- Pressing **▷** or **◁** while the power is off automatically turns on the power and starts tape playback if there is a tape in the deck (One Touch Play).
- You can switch from another source to the tape deck just by pressing **▷** or **◁** (Automatic Source Selection).
- When you want to reduce the hiss noise in low-level high-frequency signals, press **DOLBY NR** so "DOLBY NR B" appears in the display.

Recording from a tape

— High-speed Dubbing

You can use **TYPE I** (normal) or **TYPE II** (CrO₂) tapes. The recording level is automatically adjusted.

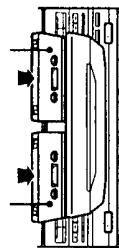
POWER



3 1 ■ 4 1 2

- 1 Press **EJECT** and insert a recorded tape in deck A and a blank tape in deck B.

With the side you want to play/record on facing forward



- 2 Press **H SPEED DUB**. Deck B stands by for recording.
- 3 Press **DIRECTION** repeatedly to select **==** to record on one side, or **↔** (or **RELAY**) to record on both sides.

Basic Operations

- 4 Press **II**. Dubbing starts. When dubbing ends, decks A and B automatically stop.

To stop dubbing

Press **■** on deck A or B.

Tips

- When you dub on both sides, start recording from the front side. If you start from the reverse side, recording stops at the end of the reverse side.
- If you set **DIRECTION** to **↔** when the tapes you use have different lengths, the tape in each deck reverses independently. If you select **RELAY**, the tapes in both decks reverse together.
- You don't have to set **DOLBY NR**, since the tape in deck B is automatically recorded in the same state as the tape in deck A.

Note

You cannot record the surround effect.

The CD Player

Using the CD display

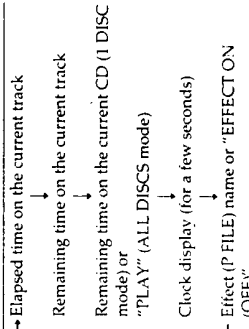
You can check the remaining time of the current track or the whole CD.

DISPLAY/DEMO



→ Press DISPLAY / DEMO during playback.

Each time you press this button in Normal Play, the display changes as follows:



To check the total playing time and the number of tracks on a CD

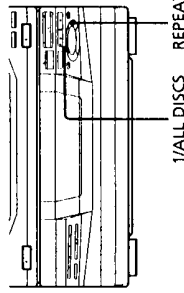
Press DISPLAY/DEMO in stop mode.

If you press DISPLAY/DEMO again, the clock display appears for a few seconds then the display returns to the previous indication.

Playing CD tracks repeatedly

— Repeat Play

This function lets you repeat a single CD or all CDs in Normal Play, Shuffle Play, and Program Play.



→ Press REPEAT repeatedly during playback until "REPEAT" appears in the display.

Repeat Play starts. The following table describes the various repeat modes.

To repeat	Press
All the tracks on the current CD	1/ALL DISCS repeatedly until "1 DISC" appears in the display.
All the tracks on all CDs	1/ALL DISCS repeatedly until "ALL DISCS" appears in the display.
Only one track*	REPEAT repeatedly while playing the track you want to repeat until "REPEAT 1" appears in the display.

* You can't repeat a single track during Shuffle Play and Program Play.

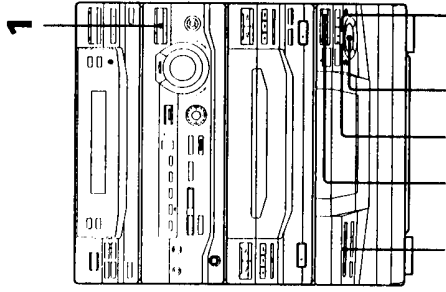
To cancel Repeat Play

Press REPEAT repeatedly until "REPEAT" or "REPEAT 1" disappears from the display.

Playing CD tracks in random order

— Shuffle Play

You can play all the tracks on one CD or all the CDs in random order.



DIRECT PLAY 4 3 log dial 2

1 Press FUNCTION repeatedly until "CD" appears in the display.

2 Press PLAY MODE repeatedly until "SHUFFLE" appears in the display.

3 Press 1/ALL DISCS to choose "1 DISC" or "ALL DISCS."

"All DISCS" shuffles the tracks on all the CDs in the player. "1 DISC" shuffles the tracks on the CD in the playing position.

4 Press ▷.

"▷" appears and all the tracks play in random order.

To cancel Shuffle Play

Press PLAY MODE repeatedly until "SHUFFLE" or "PROGRAM" disappears from the display. The tracks continue playing in their original order.

To select a desired CD

Press one of the DIRECT PLAY buttons during 1 Disc Shuffle Play.

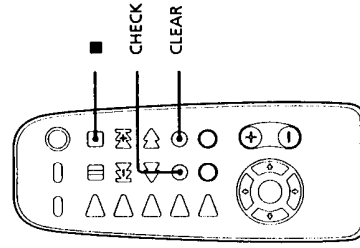
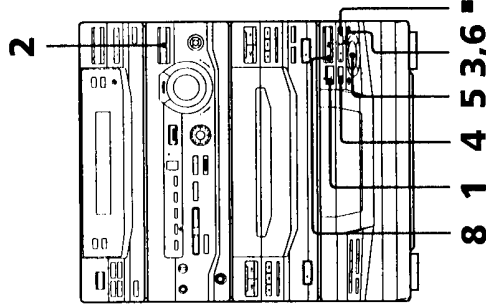
Tips

- You can start Shuffle Play during Normal Play by pressing PLAY MODE repeatedly until "SHUFFLE" appears in the display.
- To skip a track, turn the jog dial clockwise (or press AMIS ►► on the remote).

Programming CD tracks

— Program Play

You can create a program of up to 32 tracks from all the CDs in the order you want them to be played.



- 1 Place CDs and close the front cover.

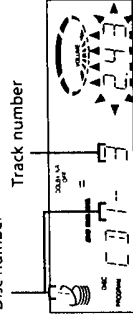
- 2 Press FUNCTION repeatedly until "CD" appears in the display.

- 3 Press PLAY MODE repeatedly until "PROGRAM" appears in the display.

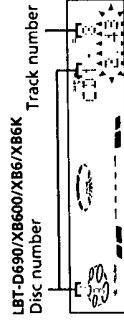
- 4 Press DISC SKIP to select a CD.

- 5 Turn the jog dial until the desired track appears in the display.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K
Disc number



Total playing time



Total playing time

- 6 Press PLAY MODE once.

The track is programmed. "STEP" and the programmed playing order appear, followed by the total playing time.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K
The last programmed track



LBT-D690/XB600/XB6/XB6K
The last programmed track

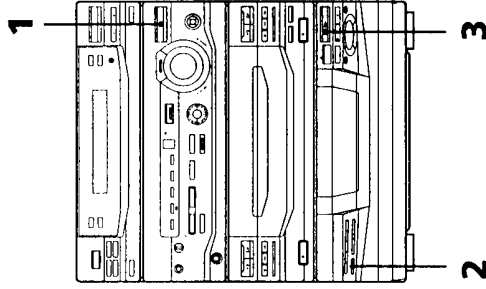


Total playing time

Playing CDs without interruption

— Non-Stop Play

You can play CDs without pausing between tracks.



- 1 Press FUNCTION repeatedly until "CD" appears in the display.

- 2 Press NON-STOP so the indicator on this button lights up.

- 3 Press Δ .

To cancel Non-Stop Play

Press NON-STOP so the indicator on this button goes off.

- 7 To program additional tracks, repeat steps 4 through 6. Skip step 4 to select tracks from the same disc.

- 8 Press Δ .

All the tracks play in the order you selected.

To cancel Program Play

Press PLAY MODE repeatedly until "PROGRAM" or "SHUFFLE" disappears from the display.

To	Press
Check the program	CHECK on the remote repeatedly. After the last track, "CHECK END" appears.
Clear the last selected track	CLEAR on the remote in stop mode.
Clear a specific track	CHECK on the remote repeatedly until the number of the track to be cleared lights up, then press CLEAR.
Add a track to the program	1 Press DISC SKIP to select a CD. 2 Turn the jog dial to select a track. 3 Press PLAY MODE.
Clear the entire program	once in stop mode or twice while playing.

Tips

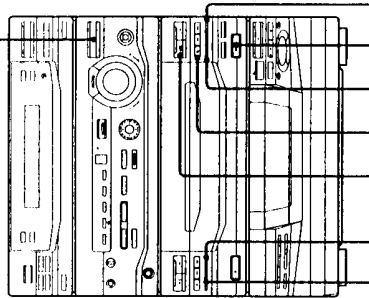
- The program you created remains in the CD player's memory even after it has been played. Press Δ to play the same program again.
- If "..." appears instead of the total playing time while programming, this means:
 - you have programmed a track numbered over 20, or
 - the total playing time has exceeded 100 minutes.

The Tape Deck

Recording on a tape manually

You can record from CDs, tapes, or the radio as you like. For example, you can record just the songs you want or begin recording from the middle of the tape. The recording level is adjusted automatically.

2



4 DOLBY NR 5 1 3

- 1 Insert a blank tape into deck B.
- 2 Press FUNCTION repeatedly until the source you want to record (e.g., CD) appears in the display.
- 3 Press ● REC.
Deck B stands by for recording, and the indicator on the ▷ button (for the front side) lights up.
- 4 Press DIRECTION repeatedly to select ⇄ to record on one side, or ⇄ (or RELAY) to record on both sides.

22

- 5 Press II on deck B.
Recording starts.

- 6 Start playing the source to be recorded.

To	Press
Stop recording	■ on deck B
Pause recording	II on deck B

Tips

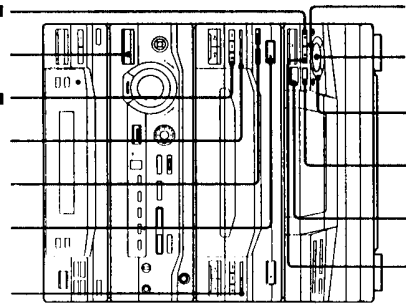
- If you want to record on the reverse side, press ◀ so the indicator on the ◀ button (for the reverse side) lights up.
- When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR before step 5 so "DOLBY NR B" appears in the display.

Recording CDs by specifying the track order

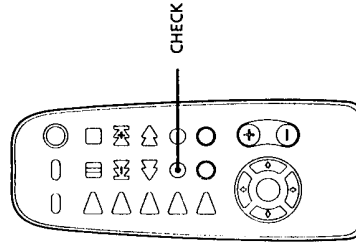
— Program Edit

You can record tracks from all the CDs in the order you want. When programming, make sure the playing times for each side do not exceed the length of one side of the tape.

12 2 1113 3



9 1 5 EDIT 6 4,7



continued 23

Recording CDs by specifying the track order (continued)

- 7** Press **PLAY MODE** once. The track is programmed. "STEP" and the programmed playing order appear, followed by the total playing time.

LBT-D290/D590/G3300/XB3/XB4/XB6K
The last programmed track



Previously selected track
LBT-D690/XB600/XB6/XB6K
The last programmed track



- 8** Repeat steps 5 through 7 to program additional tracks to be recorded on side A.

Skip step 5 to select tracks from the same disc.

- 9** Press **II** to insert a pause at the end of side A. "P" appears in the display and the total playing time resets to "0.00" in the display.

- 10** Repeat steps 5 through 7 to program the tracks to be recorded on side B. Skip step 5 to select tracks from the same disc.

- 11** Press **CD SYNC**. Deck B stands by for recording, the CD player stands by for playback, and the indicator on the **▷** button (for the front side) lights up.

- 12** Press **DIRECTION** repeatedly to select **◁** to record on one side, or **▷** (or **RELAY**) to record on both sides.

- 13** Press **II** on deck B. Recording starts.

To stop recording

Press **II** on deck B or on the CD player.

To check the order

Press **CHECK** on the remote repeatedly. After the last track, "CHECK END" appears.

To cancel Program Edit

Press **PLAY MODE** repeatedly until "PROGRAM" or "SHUFFLE" disappears from the display.

Selecting the tape length automatically

— Tape Select Edit

You can check the most suitable tape length for recording a CD. Note that you cannot use Tape Select Edit for discs containing more than 20 tracks.

- ➔ After inserting a CD, press **EDIT** once so "EDIT" flashes.

The required tape length for the CD in the playing position appears, followed by the total playing time for sides A and B.

Note

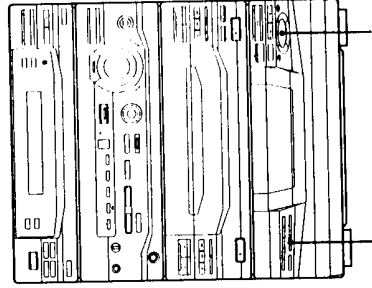
You cannot use this function when Program Play mode has been set. After clearing the entire program (see "To clear the entire program" on page 21), follow the above procedure.

DJ Effects

Looping part of a CD

— Loop

With the loop function, you can repeat part of a CD during playback. This lets you create original recordings.



LOOP

Jog dial

- ➔ Press and hold **LOOP** during playback at the point you want to start the Loop function, and release to resume normal playback.

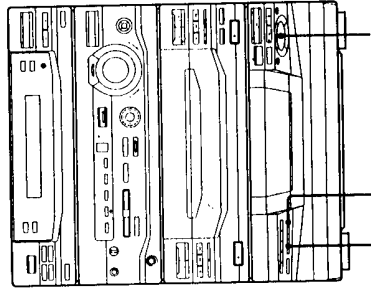
To adjust the loop length

Turn the jog dial while holding **LOOP** (or press **MUSIC MENU** **◀** or **▶** while holding **LOOP** on the remote) to select different loop lengths.

Flashing part of a CD

— Flash

With the flash function, you can "flash" the CD sound during playback. This lets you create original recordings.



LOOP FLASH

Jog dial

- ➔ Press and hold **FLASH** during playback at the point you want to start the Flash function, and release to resume normal playback.

To adjust the flash length

Turn the jog dial while holding **FLASH** (or press **MUSIC MENU** **◀** or **▶** while holding **FLASH** on the remote) to select different flash lengths.

To use LOOP and FLASH together

Press and hold both **LOOP** and **FLASH** at the same time.

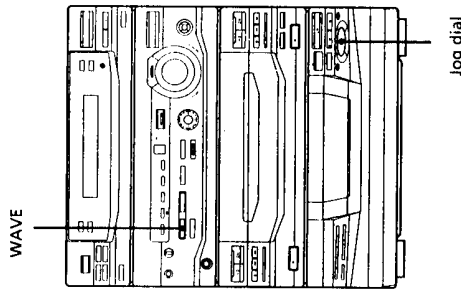
Note

The loop and flash length cannot be adjusted in stop mode. Adjust the loop and flash lengths during operation.

Waving the equalizer

— Wave

With the Wave function, you can fluctuate the graphic equalizer automatically while listening to a source. This effect can be used with any source, but it cannot be recorded.



➔ Press and hold WAVE while listening to a source at the point you want to start the Wave function, and release to resume normal playback.

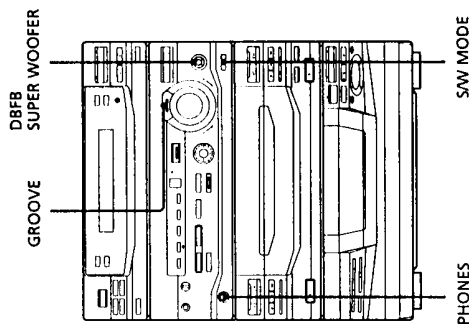
To adjust the wave length

Turn the jog dial while holding WAVE to select different wave lengths.

Sound Adjustment

Adjusting the sound

You can reinforce the bass, create a more powerful sound, and listen with headphones.



To reinforce the bass (DBFB) (LBT-D290/G3300/XB3/XB3K only)

Press DBFB.*

Each time you press this button, the DBFB level display changes as follows:

DBFB ■■■ → DBFB ■■■■■ → display off

"DBFB ■■■■■" reinforces the bass more than "DBFB ■■■".

* DBFB = Dynamic Bass Feedback

To reinforce the bass from the super woofer (SUPER WOOFER) (except for LBT-D290/G3300/XB3/XB3K)

Press SUPER WOOFER.

Each time you press this button, the super woofer level display changes as follows:

SUPER WOOFER FLAT → LOW → HIGH

To select the super woofer mode (except for LBT-D290/G3300/XB3/XB3K)

Press S/W MODE while the super woofer is on.

Each time you press this button, the super woofer mode display changes as follows:

MOVIE ↔ MUSIC

For a powerful sound (GROOVE)

Press GROOVE.

The volume switches to power mode, the equalizer curve changes, the bass level (DBFB or SUPER WOOFER) changes to "HIGH," and the indicator on the GROOVE button lights up. Press GROOVE again to return to the previous volume.

Notes

- The music sound will be distorted when you use the DBFB system with the graphic equalizer if the bass is too strong. Adjust the bass slowly while listening to the music so you can monitor the effect of the adjustment.
- Canceling GROOVE cancels the equalizer curve and bass level. Adjust the equalization to obtain the effect you desire.

To listen through the headphones

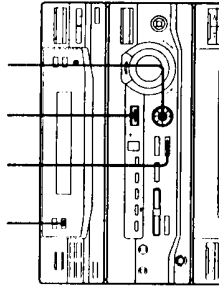
Connect the headphones to the PHONES jack. No sound will come from the speakers.

Selecting the audio emphasis

The audio emphasis menu lets you select the sound characteristics according to the music you are listening to.

The personal file function (see "Making a personal audio emphasis file (Personal File)") lets you store your own effects.

SPECTRUM ANALYZER **EFFECT 1,2,3**



- 1 Press **GEQ** $\blacktriangle/\blacktriangledown$ (or **MUSIC MENU** $\blacktriangle/\blacktriangledown$ on the remote) repeatedly to select **MENU 1** or **MENU 2**. See the chart "Music menu options" below. The last audio emphasis chosen from that menu appears in the display.
- 2 Press **GEQ** $\blacktriangle/\blacktriangledown$ (or **MUSIC MENU** $\blacktriangle/\blacktriangledown$ on the remote) repeatedly to select the audio emphasis you desire. The audio emphasis name appears in the display.
- 3 Press **ENTER**. You don't need to press **ENTER** when you use the remote.

To cancel the audio emphasis

Press **EFFECT** (or **MUSIC MENU ON/OFF** on the remote) repeatedly so the indicator on the **EFFECT** button goes off.

Music menu options

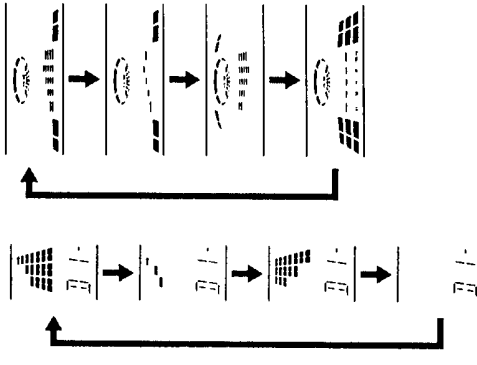
"**SUR** (|||||)" appears if you select an audio emphasis with a surround effect.

Press	To select
GEQ $\blacktriangle/\blacktriangledown$	MENU 1
GEQ $\blacktriangle/\blacktriangledown$	MENU 2
GEQ $\blacktriangle/\blacktriangledown$	ROCK
GEQ $\blacktriangle/\blacktriangledown$	MOVIE
GEQ $\blacktriangle/\blacktriangledown$	POP
GEQ $\blacktriangle/\blacktriangledown$	GAME
GEQ $\blacktriangle/\blacktriangledown$	JAZZ
GEQ $\blacktriangle/\blacktriangledown$	NIGHT
GEQ $\blacktriangle/\blacktriangledown$	DANCE
GEQ $\blacktriangle/\blacktriangledown$	PARTY
GEQ $\blacktriangle/\blacktriangledown$	SALSA
GEQ $\blacktriangle/\blacktriangledown$	RELAX

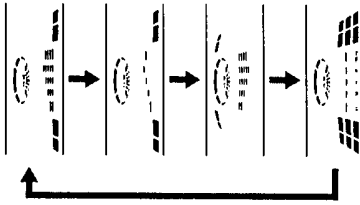
To change the equalizer display

Each time you press **SPECTRUM ANALYZER**, the equalizer display changes to show one of the four displays below.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K



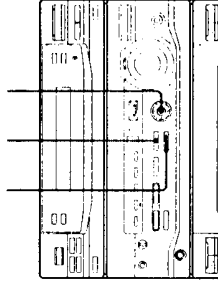
LBT-D690/XB600/XB6/XB6K



Adjusting the audio emphasis

You can adjust the audio emphasis using the graphic equalizer and surround effect.

6 2 3,4



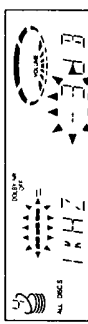
Adjusting the graphic equalizer

You can adjust the sound by raising or lowering the levels of specific frequency ranges.

Before operation, first select the basic audio emphasis you want for your sound.

- 1 Select the basic audio emphasis you want for your sound. (see "Selecting the audio emphasis.")
- 2 Press **GEQ CONTROL**. The frequency range appears and the level value flashes in the display.
- 3 Press **GEQ** $\blacktriangle/\blacktriangledown$ repeatedly to select a frequency band.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K



- 4 Press **GEQ** $\blacktriangle/\blacktriangledown$ to adjust the level.



LBT-D690/XB600/XB6/XB6K



- 5 Repeat steps 3 and 4 to adjust the other frequency bands.
- 6 Press **ENTER** when finished.

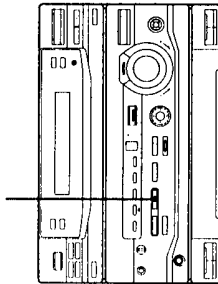
Note

If you choose another audio emphasis (other than "EFFECT OFF"), the adjusted sound effect is lost. To retain the adjusted sound effect for future use, store it in a personal file (see "Making a personal audio emphasis file").

Activating the surround effect

You can enjoy the surround effect.

SURROUND



- ➔ Press **SURROUND** so "SUR (|||||)" appears in the display.

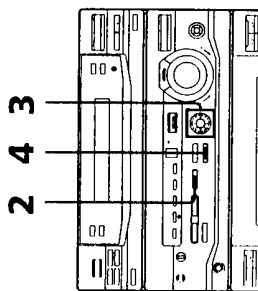
Note

If you choose other sound effects, the surround effect will be canceled. To retain the effect, store it in a personal file (see "Making a personal audio emphasis file").

Making a personal audio emphasis file

— Personal File

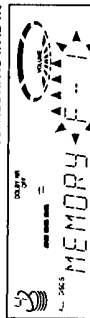
You can create personal files of audio patterns (surround effect and graphic equalizer) and store them in the unit's memory. Later call up an audio pattern to play a favorite tape, CD, or radio program. You can create up to five audio files. Before operation, first select the basic audio emphasis you want for your sound.



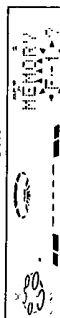
1 Create the sound effect you want by using the graphic equalizer and surround effect (see "Adjusting the audio emphasis").

2 Press P FILE MEMORY.
A personal file number appears in the display.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K



LBT-D690/XB600/XB6/XB6K



3 Press GEQ $\blacktriangle/\blacktriangledown$ to select the file number (P FILE) where you want to store the sound effect.

4 Press ENTER.

The adjusted sound effects are stored under the selected file number. Any settings previously stored at this memory location are erased and replaced by the new settings.

To call up the personal file

1 Press GEQ $\blacktriangle/\blacktriangledown$ (or MUSIC MENU $\blacktriangle/\blacktriangledown$ on the remote) repeatedly to display the last selected personal file.

2 Press GEQ $\blacktriangle/\blacktriangledown$ (or MUSIC MENU $\blacktriangle/\blacktriangledown$ on the remote) repeatedly to select the desired personal file.

3 Press ENTER.

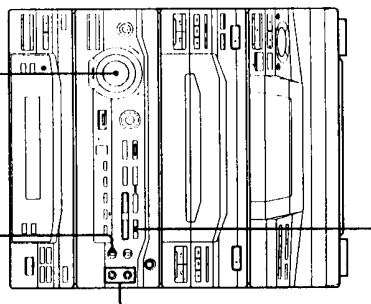
You don't need to press ENTER when you use the remote.

Other Features

Singing along: Karaoke

You can sing along with any stereo CD or tape by turning down the singer's voice. You need to connect an optional microphone.

1, 5 **4**



2 **3**

1 Turn MIC LEVEL to MIN to turn down the microphone level.

2 Connect an optional microphone to the MIC (MIC 1*) jack.

When you use two microphones at the same time, connect the other one to the MIC 2* jack.

(* LBT-XB3K/XB4K/XB6K only)

3 Press KARAOKE PON/MPX repeatedly to obtain the desired karaoke effect.

Each time you press this button, the display changes as follows:

KARAOKE PON \rightarrow MPX R \rightarrow MPX L

\rightarrow EFFECT OFF (ON) \rightarrow "A" appears in the display when the karaoke mode is activated.

To	Select
Reduce the singer's voice on a CD or tape	KARAOKE PON
Reduce the right channel on a multiplex CD or tape.	MPX R
Reduce the left channel on a multiplex CD or tape.	MPX L

4 Start playing the music and adjust the volume.

5 Turn MIC LEVEL to adjust the microphone volume.

When you are done

Turn MIC LEVEL to MIN and disconnect the microphone from MIC. Then press KARAOKE PON/MPX repeatedly until "A" disappears from the display.

it is only, perhaps, the only way to ensure that the system is not too complex to be used.

- if it is found to be a new and different type of abuse, the Commission will have to consider whether it is a new and different type of abuse.

* If you're **SPRING** or **summer** about the
 "Carroll Road" is **Carroll**

- There is a growing body of research that suggests that the use of a structured approach to the assessment of a patient's mental state can improve the reliability and validity of the assessment. This approach involves the use of a structured interview schedule, which is a list of questions that the clinician asks the patient in a specific order. This approach has been found to be more reliable and valid than unstructured interviews, which rely on the clinician's own judgment of what to ask the patient. The structured approach also allows for the collection of more detailed information about the patient's mental state, as the clinician is able to ask specific questions about each symptom. This approach is also more efficient, as the clinician does not have to spend time deciding what to ask the patient. The structured approach is also more consistent, as the same questions are asked of all patients, which allows for comparison of results across different studies. The structured approach is also more transparent, as the clinician can show the patient the list of questions and explain why they are asking them. This approach is also more ethical, as the patient is able to understand what the clinician is asking them and can give their consent to the assessment. The structured approach is also more cost-effective, as it can be used by a wider range of clinicians, including those who are not specialists in mental health. The structured approach is also more user-friendly, as it can be used by a wider range of clinicians, including those who are not specialists in mental health. The structured approach is also more reliable and valid than unstructured interviews, which rely on the clinician's own judgment of what to ask the patient. The structured approach also allows for the collection of more detailed information about the patient's mental state, as the clinician is able to ask specific questions about each symptom. This approach is also more efficient, as the clinician does not have to spend time deciding what to ask the patient. The structured approach is also more consistent, as the same questions are asked of all patients, which allows for comparison of results across different studies. The structured approach is also more transparent, as the clinician can show the patient the list of questions and explain why they are asking them. This approach is also more ethical, as the patient is able to understand what the clinician is asking them and can give their consent to the assessment. The structured approach is also more cost-effective, as it can be used by a wider range of clinicians, including those who are not specialists in mental health. The structured approach is also more user-friendly, as it can be used by a wider range of clinicians, including those who are not specialists in mental health.

— 54999 —

They can set the system to turn off at a given time, so you can fall asleep listening to music. They can, for instance, power the recording time to 10 minutes for the first track.



and time delays for various due dates along the planning horizon.

work on the way, ... and the ...

where α is the probability of a false alarm, β is the probability of a missed alarm, γ is the probability of a correct alarm, and δ is the probability of a correct non-alarm.

ਅੰਤਰਰਾਸ਼ਟਰੀ ਸੰਗਠਨਾਂ ਦੀ ਸਹਿਯੋਗਤਾ ਨਾਲ

2010-03-23

100

To cancel the Sleep timer function








Press SLIP repeatedly until "SLEEP OFF" appears on the display.

[illegible]

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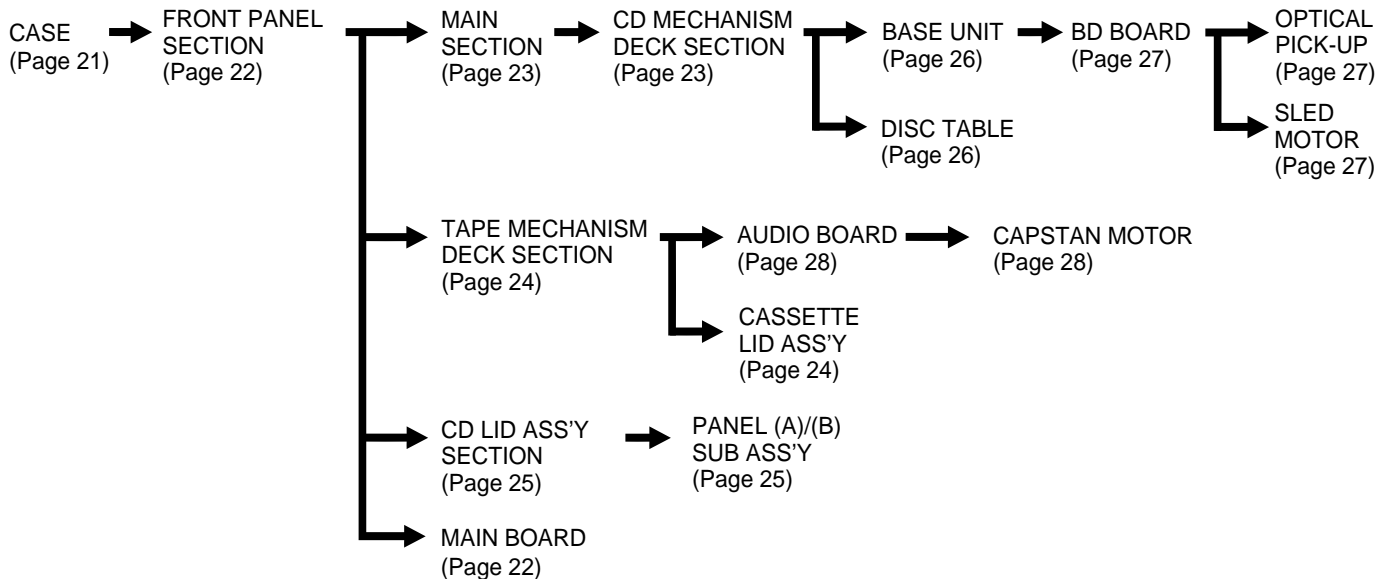


- 1 Prepare the initial counter value using the `play()` function:
 - The `play()` function inserts a specific block, creates a position, and programs the machine.
 - The `play()` function inserts a specific block, creates a position, and programs the machine.
- 2 Turn `VOLUME` to adjust the volume.
- 3 Press `ON/OFF` button.

- 4 Press **TUNING** \rightarrow \downarrow to select **DAILY** or **DAILY 2**. Then press **ENTER** \rightarrow **NEXT**.

- 5 Use \uparrow and \downarrow to move information around in the display.

- 6 Set the time to start playback. Press **TUNING** \rightarrow \downarrow to set the hour, then press **ENTER** \rightarrow **NEXT**.

- 7 Press **TUNING** \rightarrow \downarrow to set the minutes, then press **ENTER** \rightarrow **NEXT**.

- 8 Set the time to stop playback following the above procedure.

- 9 Press **TUNING** \rightarrow **NEXT**.

- 10 The start time, the stop time, and the music source appear in the area before the original display returns.


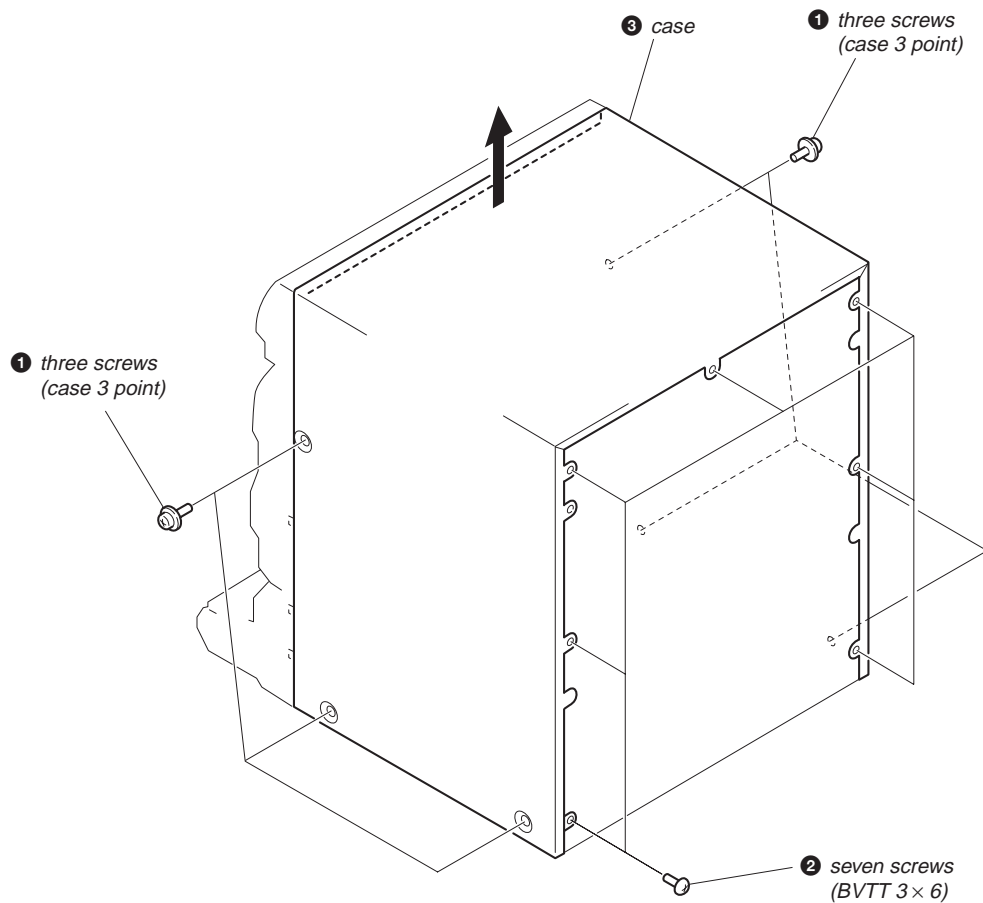
SECTION 2 DISASSEMBLY

- This set can be disassembled in the order shown below.

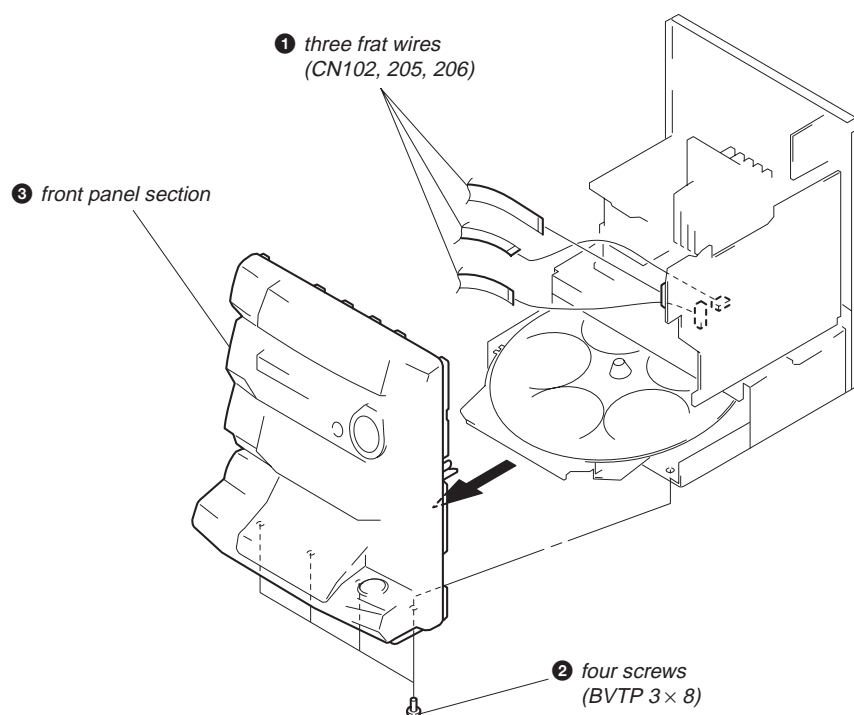


Note: Follow the disassembly procedure in the numerical order given.

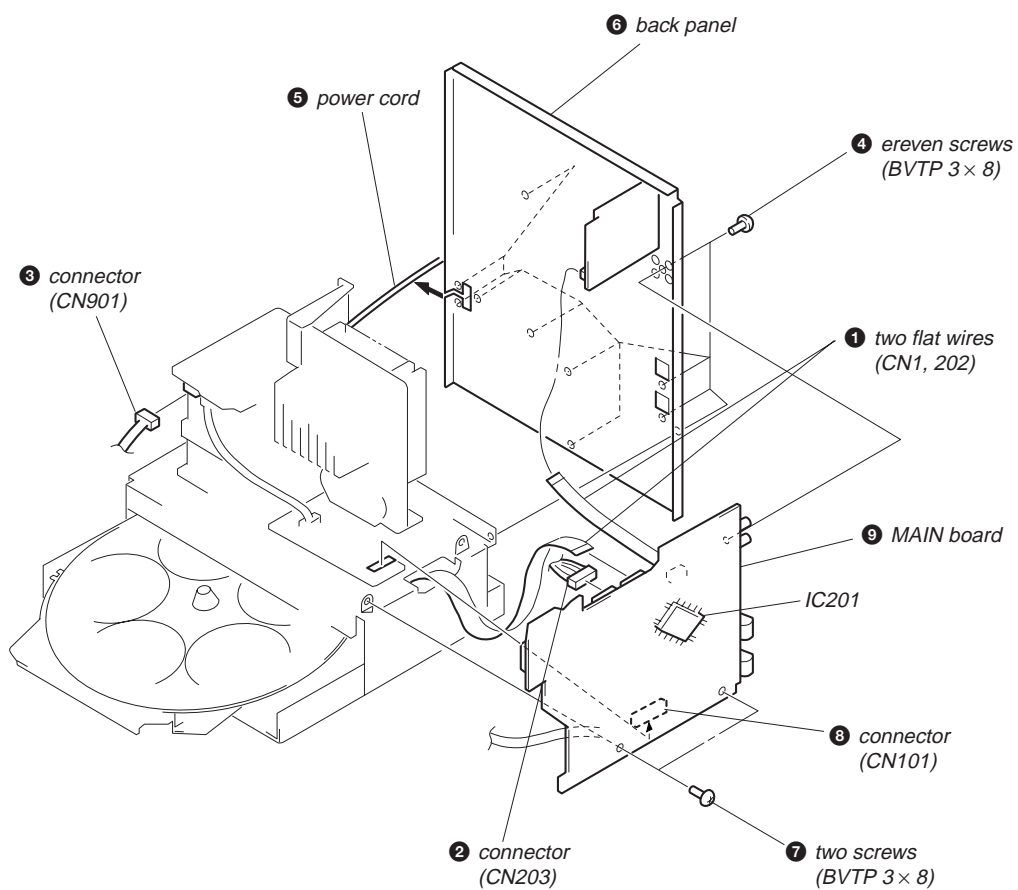
CASE



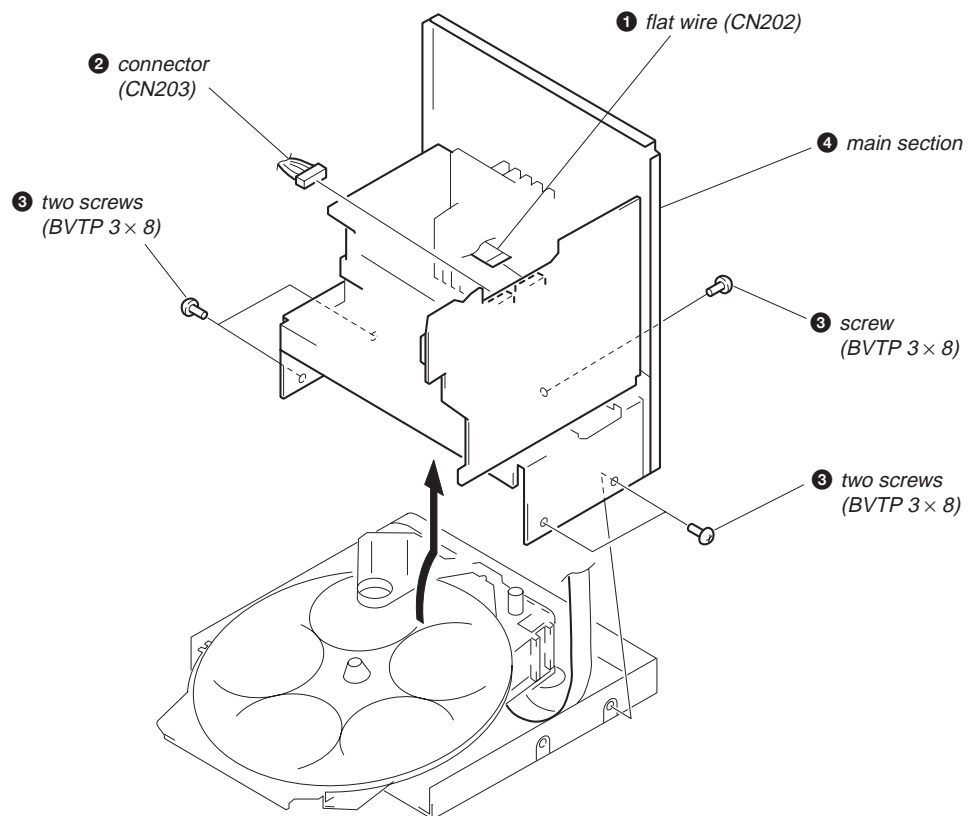
FRONT PANEL SECTION



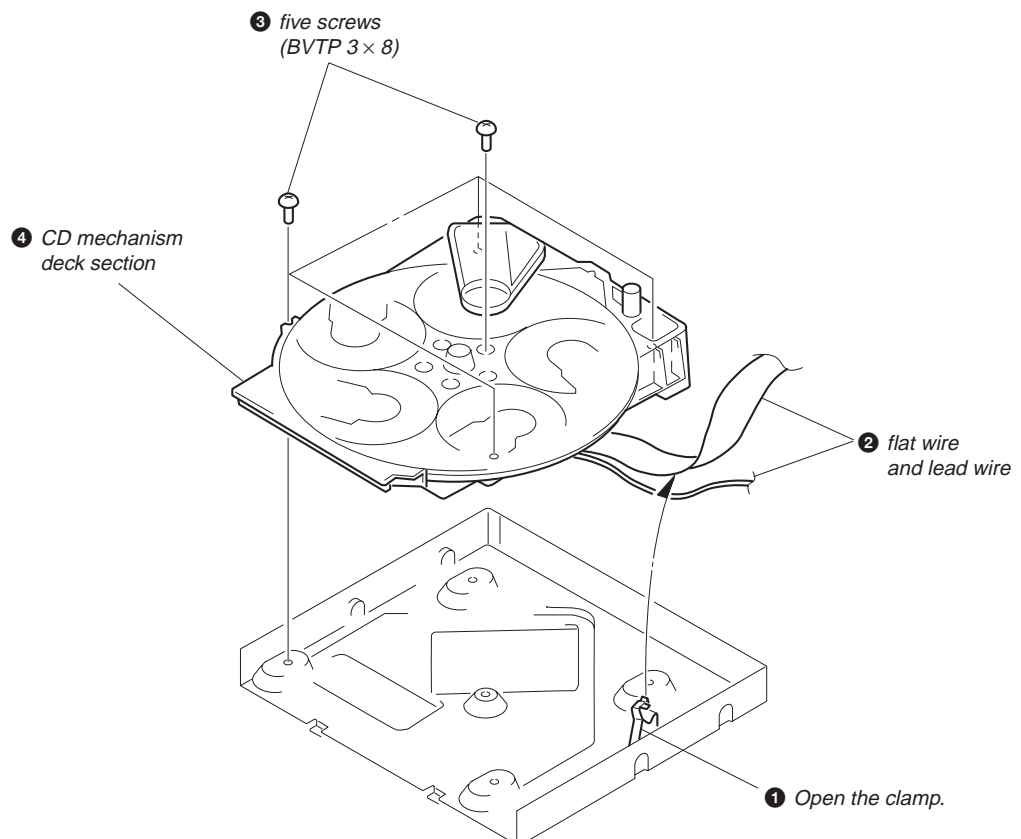
MAIN BOARD



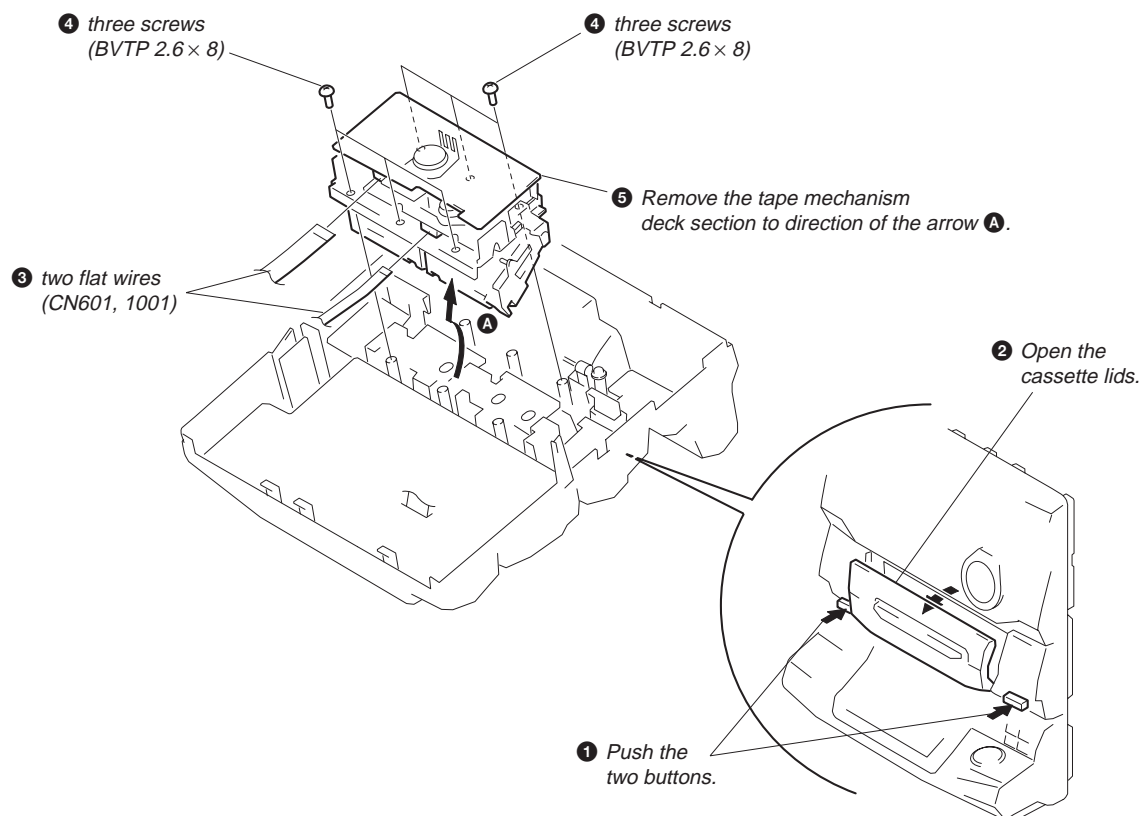
MAIN SECTION



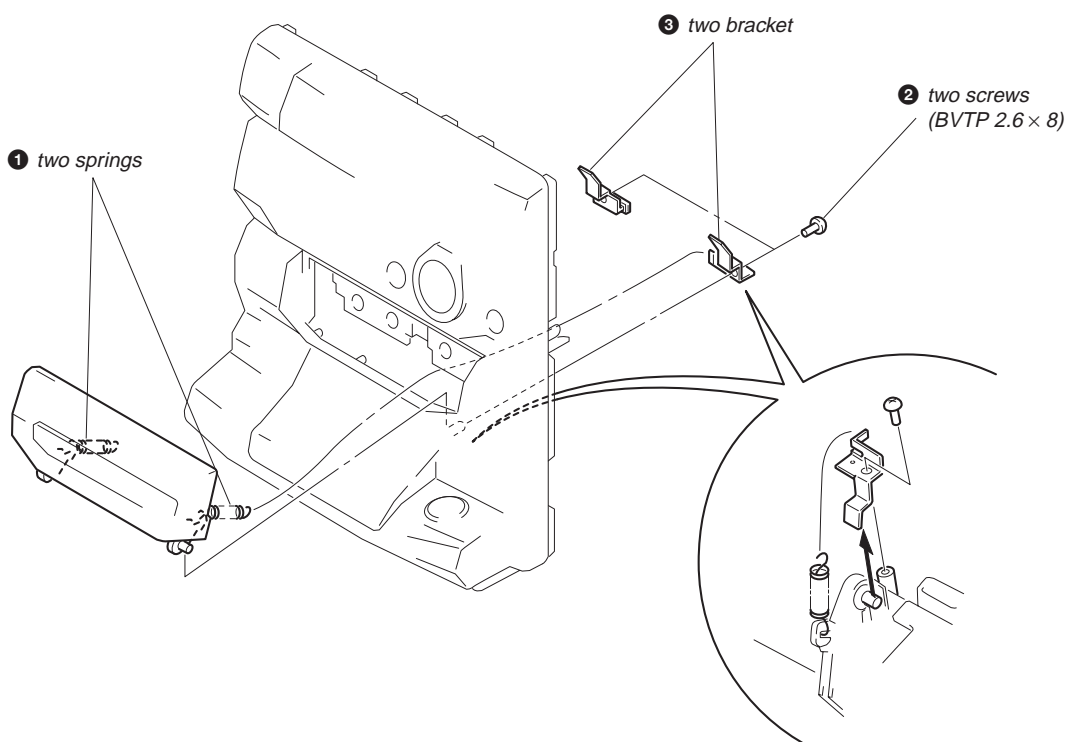
CD MECHANISM DECK SECTION



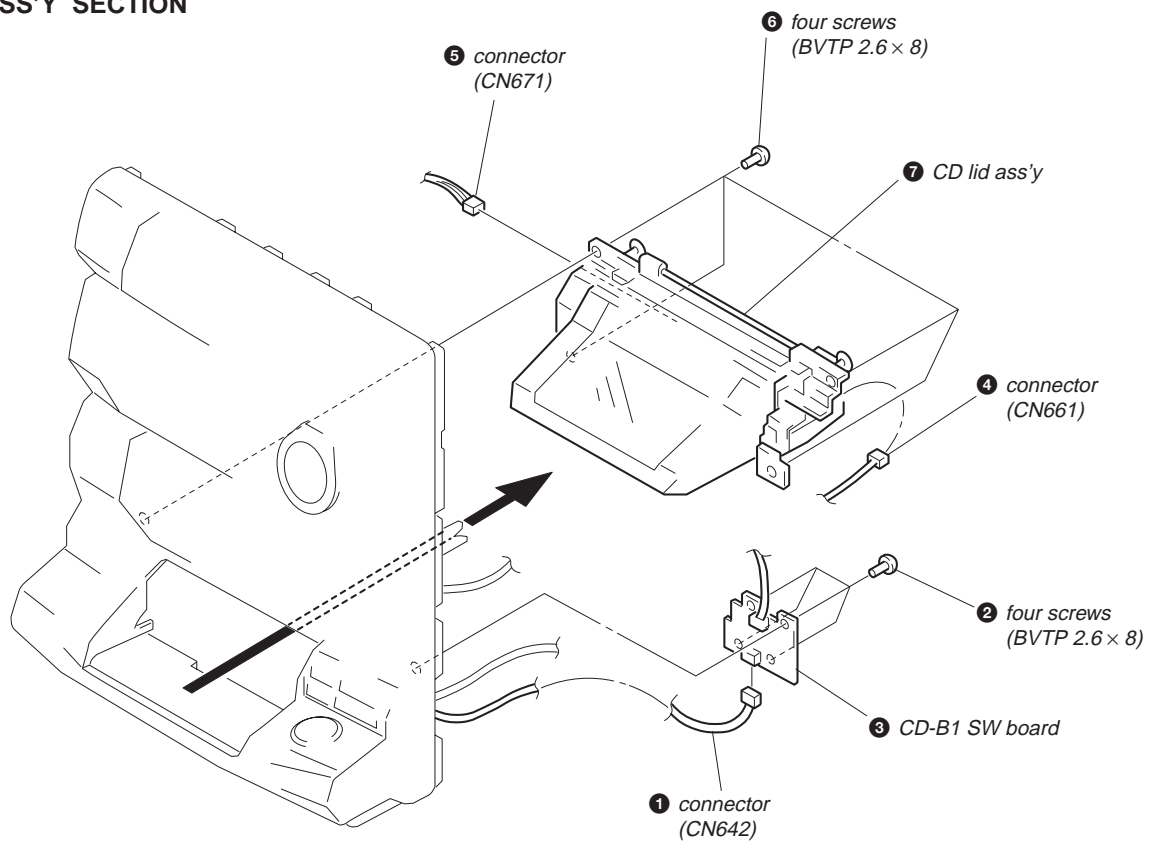
TAPE MECHANISM DECK SECTION



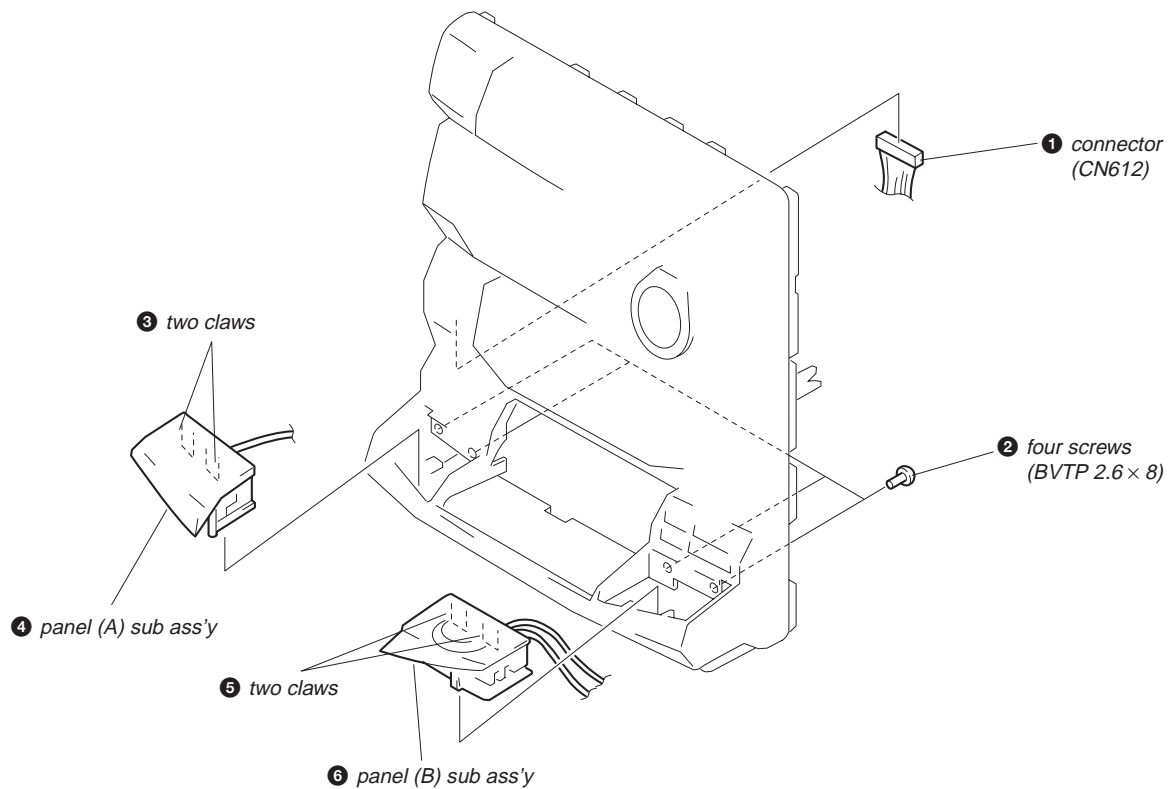
CASSETTE LID ASS'Y



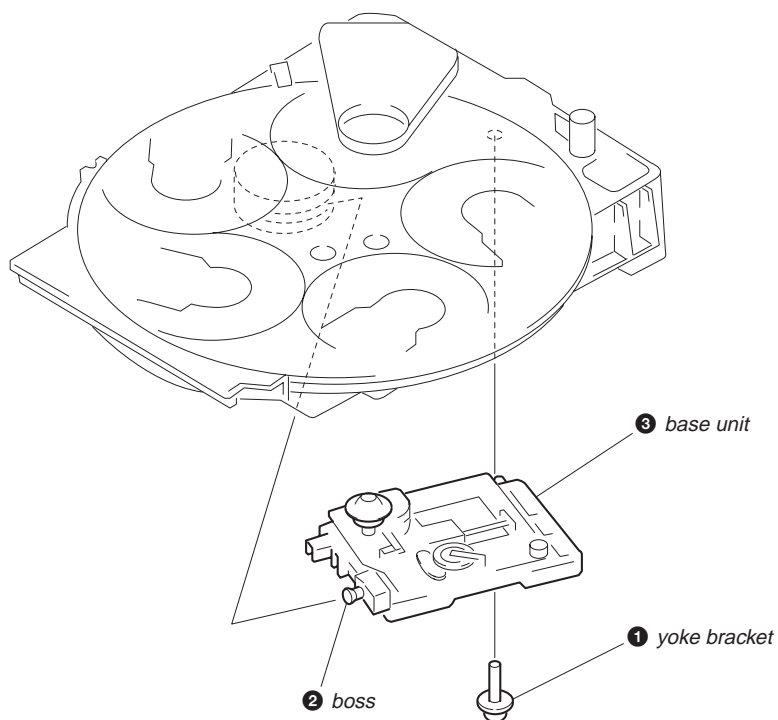
CD LID ASS'Y SECTION



PANEL (A) / (B) SUB ASS'Y



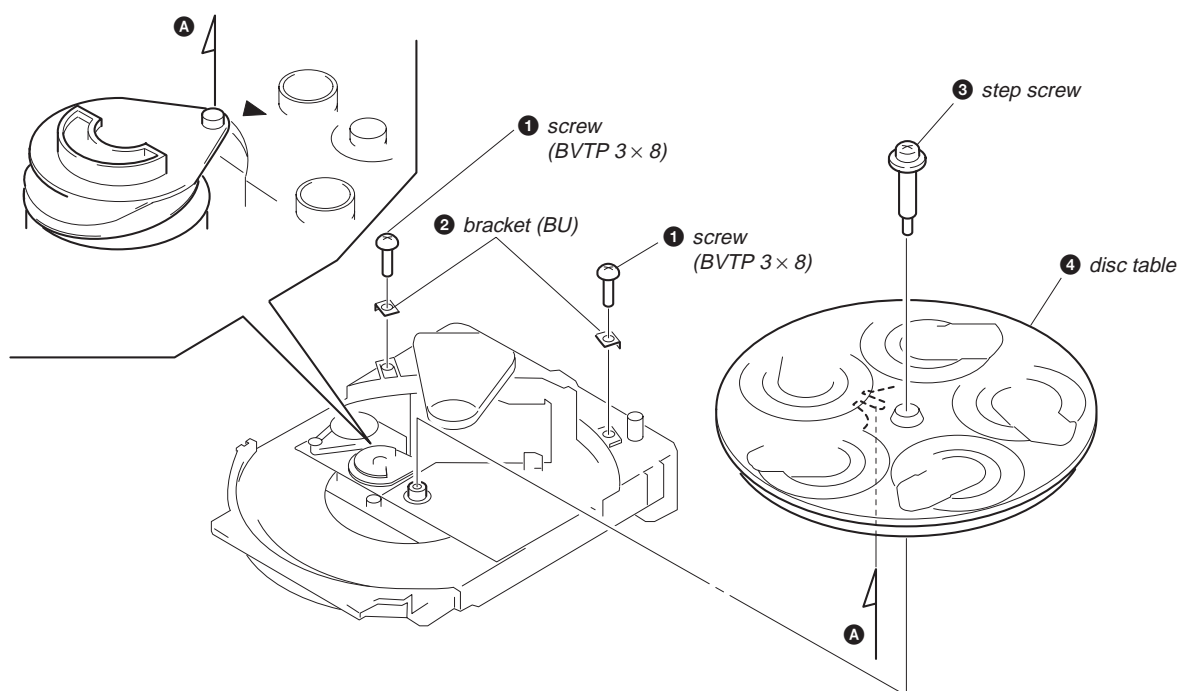
BASE UNIT



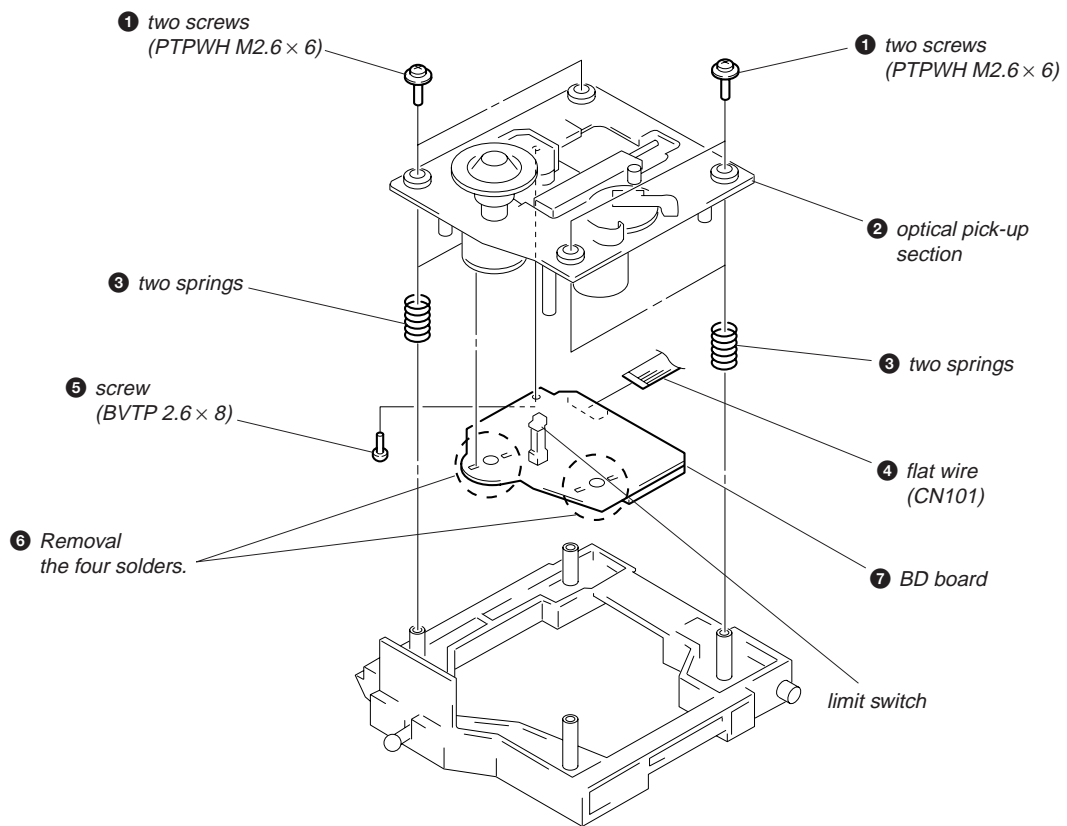
DISC TABLE

Note:

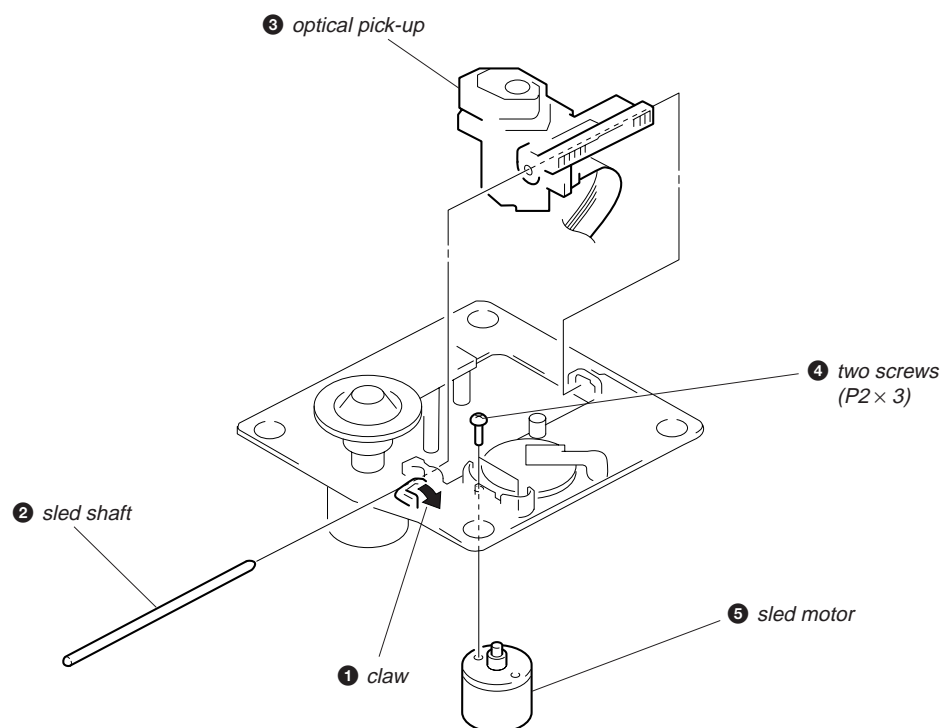
When the disc table is installed, adjust the positions of roller cam and mark ► as shown in the figure, then set to the groove of disc table.



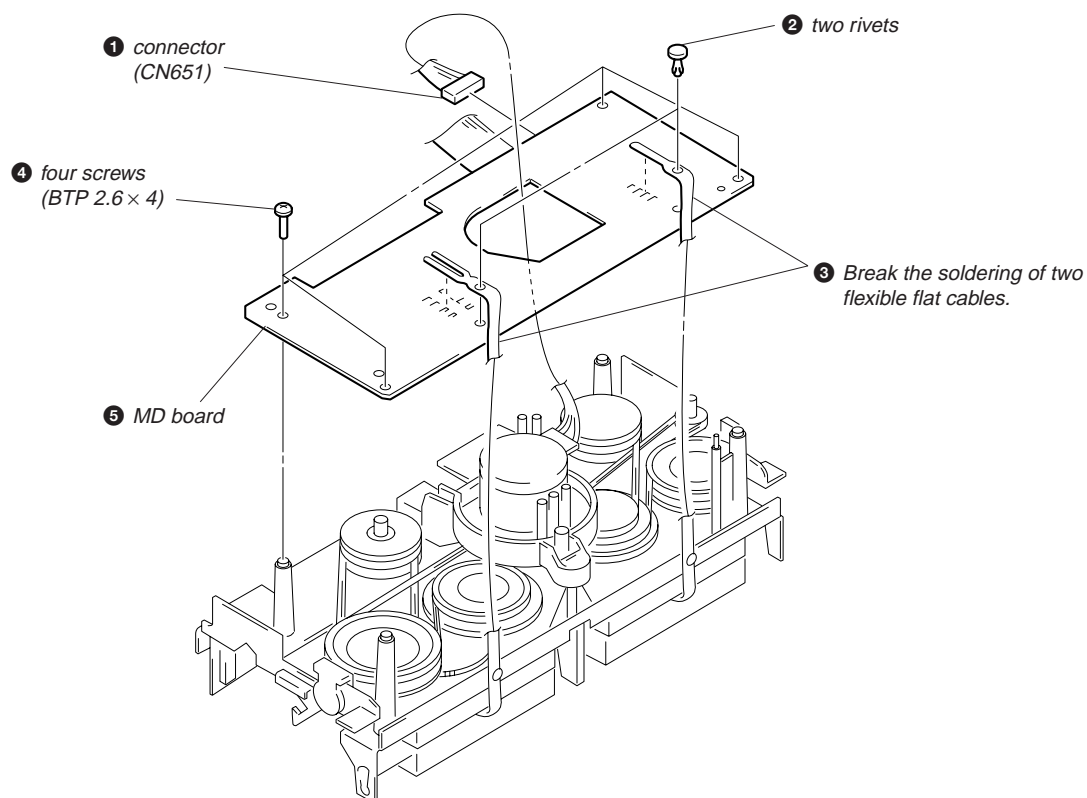
BD BOARD



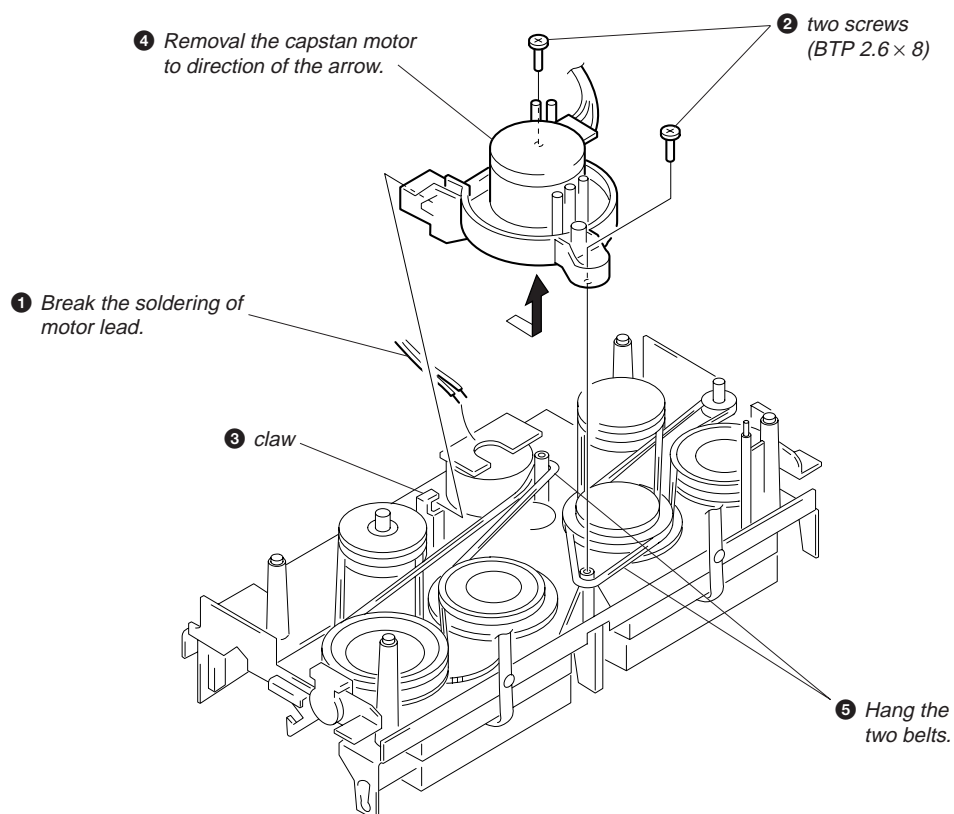
OPTICAL PICK-UP, SLED MOTOR



AUDIO BOARD



CAPSTAN MOTOR



SECTION 3 TEST MODE

[MC Cold Reset]

- The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons **[GROOVE]**, **[ENTER/NEXT]**, and **[DISC 1]** simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[CD Delivery Mode]

- This mode moves the pickup to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press **[POWER]** button to turn the set ON.
2. Press **[PLAY MODE]** button and **[POWER]** button simultaneously.
3. A message “LOCK” is displayed on the fluorescent indicator tube, and the CD delivery mode is set.

[MC Hot Reset]

- This mode resets the set with the preset data kept stored in the memory. The hot reset mode functions same as if the power cord is plugged in and out.

Procedure:

1. Press three buttons **[GROOVE]**, **[ENTER/NEXT]**, and **[DISC 2]** simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[Sled Servo Mode]

- This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the pickup.

Procedure:

1. Select the function “CD”.
2. Press three buttons **[GROOVE]**, **[ENTER/NEXT]**, and **[FLASH]** simultaneously.
3. The Sled Servo mode is selected, if “CD” is blanking on the fluorescent indicator tube.
4. With the CD in stop status, press **[▶▶]** button in CD section to move the pickup to outside track, or **[◀◀]** button to inside track.
5. To exit from this mode, perform as follows:
 - 1) Move the pickup to the most inside track.
 - 2) Press three buttons in the same manner as step 2.

Note:

- Always move the pickup to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
- Do not run the sled motor excessively, otherwise the gear can be chipped.

[Change-over of FUNCTION Name]

- The FUNCTION name of external input terminal can be changed over to VIDEO or MD. With the FUNCTION selected to “MD”, about 5dB mute is applied to the input gain.

Procedure:

1. Press **[POWER]** button to turn the set OFF.
2. Press **[POWER]** button together with **[FUNCTION]** button, and the power is turned on, the display of fluorescent indicator tube changes to “MD” or “VIDEO” instantaneously, and thus the FUNCTION is changed over.

[Change-over of AM Tuner Step between 9kHz and 10kHz]

- A step of AM channels can be changed over between 9kHz and 10kHz.

Procedure:

1. Press **[POWER]** button to turn the set ON.
2. Select the function “TUNER”, and press **[TUNER/BAND]** button to select the BAND “AM”.
3. Press **[POWER]** button to turn the set OFF.
4. Press **[ENTER/NEXT]** and **[POWER]** buttons simultaneously, and the display of fluorescent indicator tube changes to “AM 9k STEP” or “AM 10k STEP”, and thus the channel step is changed over.

[LED and Fluorescent Indicator Tube All Lit, Key Check Mode]

Procedure:

1. Press three buttons **[GROOVE]**, **[ENTER/NEXT]**, and **[DISC 3]** simultaneously.
2. LEDs and fluorescent indicator tube are all turned on. Press **[DISC 2]** button, and the key check mode is activated.
3. In the key check mode, the fluorescent indicator tube displays “K 1 V0 J0”. Each time a button is pressed, “K” value increases. However, once a button is pressed, it is no longer taken into account.
 - “J” value increases like 1, 2, 3 ... if rotating **[JOG]** knob in “+” direction, or it decreases like 0, 9, 8 ... if rotating in “-” direction.
 - “V” value increases like 1, 2, 3 ... if rotating **[VOLUME]** knob in “+” direction, or it decreases like 0, 9, 8 ... if rotating in “-” direction.
4. To exit from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.


[Aging Mode]

This mode can be used for operation check of CD section and tape deck section.

- If an error occurred:
The aging operation stops.
- If no error occurs:
The aging operation continues repeatedly.

1. Aging Mode in CD Section

1-1. Operating Method of Aging Mode

1. Set discs in DISC 1 and DISC 3 trays.
 2. Select the function "CD".
 3. Press three buttons **GROOVE** , **ENTER/NEXT** , and **DISC 5** simultaneously.
 4. The aging mode is activated, if a roulette mark on the fluorescent indicator tube is blinking.
 5. In the aging mode, the aging is executed in a sequence given in "1-2. Operation during Aging Mode".
The aging continues unless an alarm occurred.
 6. To exit from the aging mode, press **POWER** button to turn the set OFF.
- If a button other than buttons In CD section is pressed during aging, the aging in the CD section is finished.
 - To execute aging to the tape deck section successively, press  button in the deck A.
"AGING" is displayed on the fluorescent indicator tube. (For the aging in tape deck, see "2. Aging Mode in Tape Deck Section".)

1-2. Operation during aging Mode

In the aging mode, the program is executed in the following sequence.

1. The disc tray turns to select a disc. (For a disc selection sequence, see Section 1-3.)
2. TOC of disc is read.
3. The pickup accesses to the last track.
4. Steps 1 through 3 are repeated.



1-3. Disc Selection Sequence

- During the aging mode, discs are selected in the following sequence:

Disc 1 → Disc 3
↑ ↓
Disc 3 ← Disc 1

2. Aging Mode in Tape Deck Section

2-1. Operating Method of Aging Mode

1. Load a commercially available 10-minute tape into the decks A and B respectively.
(If a 10-minute tape is not available, another tape may be used but a cycle time will be longer.)
2. Select the function "TAPE".
3. Rewind tapes in advance by pressing  button respectively on decks A and B.
4. Press three buttons **GROOVE** , **ENTER/NEXT** , and **DISC 5** simultaneously.
5. Press  button on deck A. (This button triggers the aging mode.)
6. The aging mode is activated if "AGING A" is displayed on the fluorescent indicator tube.
7. In the aging mode, the aging is executed in a sequence given in "2-2. Operation during Aging Mode".
The aging continues unless an alarm occurred.

8. To exit from the aging mode, press **POWER** button to turn the set OFF.

2-2. Operation during Aging Mode

In the aging mode, the program is executed in the following sequence.

1. A tape on FWD side is played for one minute.
2. PAUSE STOP is made.
3. Recording is made for 3 minutes. (For the deck not having the record function, the play is executed.)
4. FF is executed up to the end of tape.
5. A tape is reversed, and the tape on REV side is played for one minute.
6. PAUSE STOP is made.
7. Recording is made for 3 minutes. (For the deck not having the record function, the play is executed.)
8. FF is executed up to the end of tape.
9. Steps 1 through 8 are executed for the other deck.
10. Steps 1 through 9 are repeated unless an alarm occurred.

2-3. Deck Selection Sequence

- During the aging mode, decks are selected in the following sequence:

Deck A (FWD) → Deck A (REV)
 ↑ ↓
Deck B (REV) ← Deck B (FWD)

SECTION 4 MECHANISM ADJUSTMENTS

PRECAUTION

- Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
- Demagnetize the record/playback head with a head demagnetizer.
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.

• Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	36 to 61g·cm (0.50 – 0.84 oz·inch)
Forward Back Tension	CQ-102C	2 to 6g·cm (0.026 – 0.082 oz·inch)
Reverse	CQ-102RC	36 to 61g·cm (0.50 – 0.84 oz·inch)
Reverse Back Tension	CQ-102RC	2 to 6g·cm (0.026 – 0.082 oz·inch)
FF, REW	CQ-201B	61 to 143g·cm (0.85 – 1.98 oz·inch)

• Tape Tension Measurement

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 100g (3.52 oz)
Reverse	CQ-403R	more than 100g (3.52 oz)

SECTION 5 ELECTRICAL ADJUSTMENTS

DECK SECTION

0dB=0.775V

- Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjust.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.
- The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
- The adjustments should be performed for both L-CH and R-ch.
- Switches and controls should be set as follows unless otherwise specified.
- Set to test mode. (Press key switch same time **GROOVE** **ENTER/NEXT** and **DISC 4** button.)

• Test Tape

Tape	Signal	Used for
P-4-A100	10kHz, -10 dB	Azimuth Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment
P-4-L300	315Hz 0dB	Level Adjustment

Record/Playback Head Azimuth Adjustment

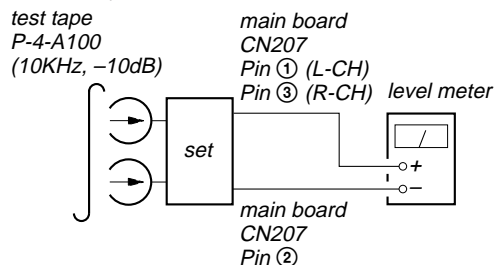
DECK A

DECK B

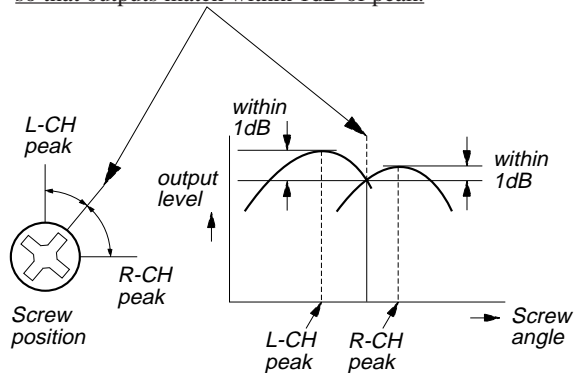
Note: Perform this adjustments for both decks

Procedure:

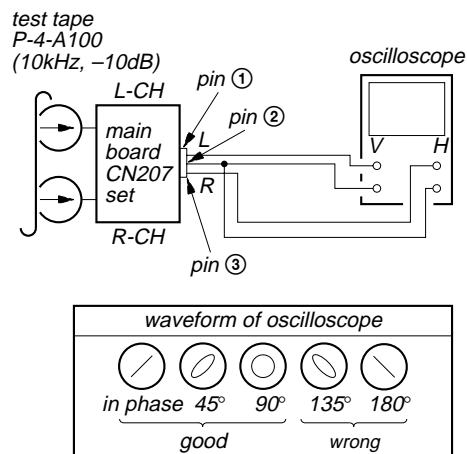
- Mode: Playback (FWD)



- Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.

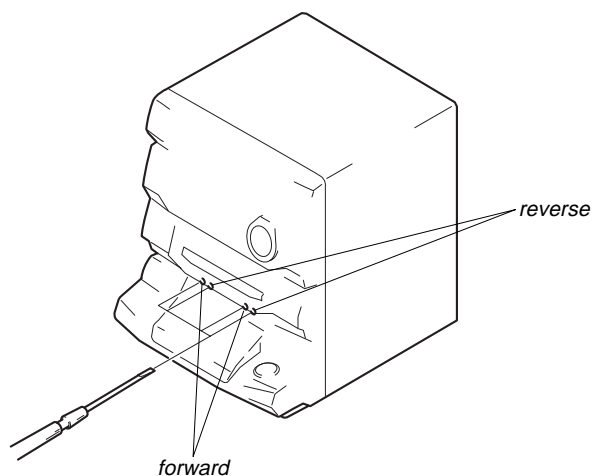


- Mode: Playback (FWD)



- Repeat steps 1 to 3 in playback (REV) mode.
- After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location: Record/Playback Head (Deck A and B) and main board.



Tape Speed Adjustment **DECK A**

Note: Start the Tape Speed adjustment as below after setting to the test mode.

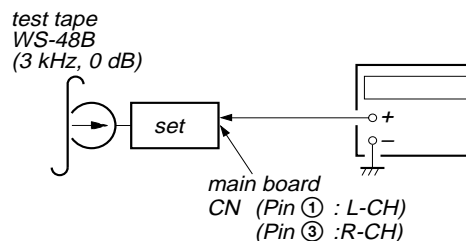
In the test mode, the tape speed is high during pressing the **H. SPEED DUBB** button.

Procedure:

- Turn the power switch on.
- Press the **GROOVE** button, **ENTER/NEXT** button and **DISC 4** button simultaneously.

To exit from the test mode, press the **POWER** button.

Mode: Playback (FWD)



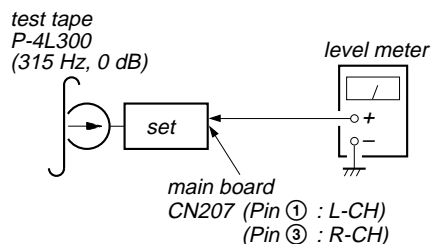
- Insert the WS-48B into the deck A and the blank tape into the deck B.
- Press the **REC** button and **▶** button on the deck B. Then the deck B is at recording mode.
- Set the deck A to playback mode.
- Keep pressing the **H. SPEED DUBB** button in playback mode. Then at HIGH speed mode.
- Adjust RV652 on the AUDIO board so that frequency counter reads $6,000 \pm 60$ Hz.
- Take off the **H. SPEED DUBB** button. Then at NORMAL speed mode.
- Adjust RV651 on the AUDIO board so that frequency counter reads $3,000^{+30}_{-10}$ Hz.
- Frequency difference between deck A and deck B the beginning of the tape should be within $\pm 1.5\%$.

Adjustment Location: AUDIO board

Playback level Adjustment **DECK A** **DECK B**

Procedure:

Mode: Playback (FWD)



Deck A is RV311 (L-CH) and RV411 (R-CH), Deck B is RV301 (L-CH) and RV401 (R-CH) so that adjustment within adjustment level as follows.

Adjustment Level:

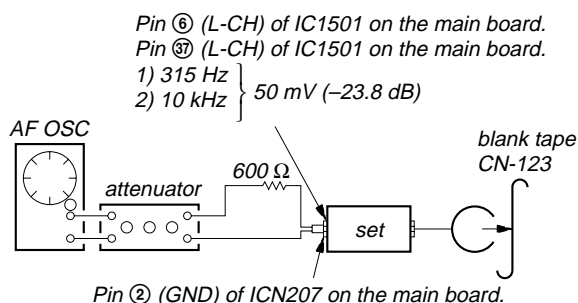
CN207 PB level: 301.5 to 338.3 mV (−8.2 to −7.2 dB) level difference between the channels: within ± 0.5 dB

Adjustment Location: AUDIO and main boards

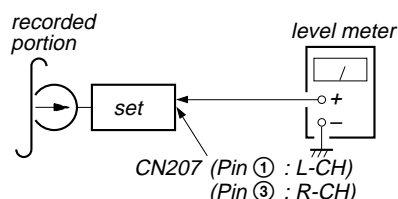
Record bias Current Adjustment **DECK B**

Procedure:

1. Mode: record



2. Mode: Playback



Confirm playback the signal recorded in step 1 become adjustable limits as follows.

If these levels do not adjustable limits, adjustment the RV341 (L-CH) and RV441 (R-CH) on the AUDIO board to repeat steps 1 and 2.

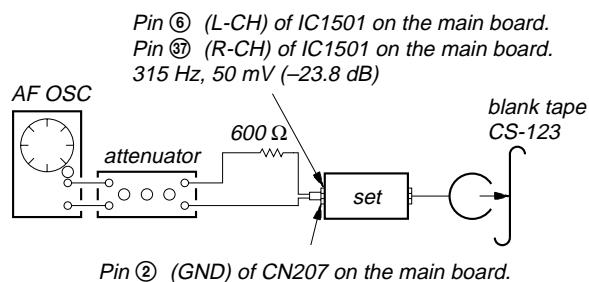
Adjustable limits: Playback output of 315 Hz to playback output of 10kHz: 0±0.5 dB

Adjustment Location: AUDIO and main boards

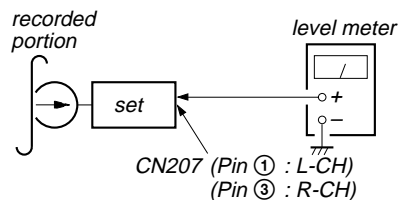
Record Level Adjustment **DECK B**

Procedure:

1. Mode: record



2. Mode: Playback



Confirm playback the signal recorded in step 1 become adjustable limits as follows.

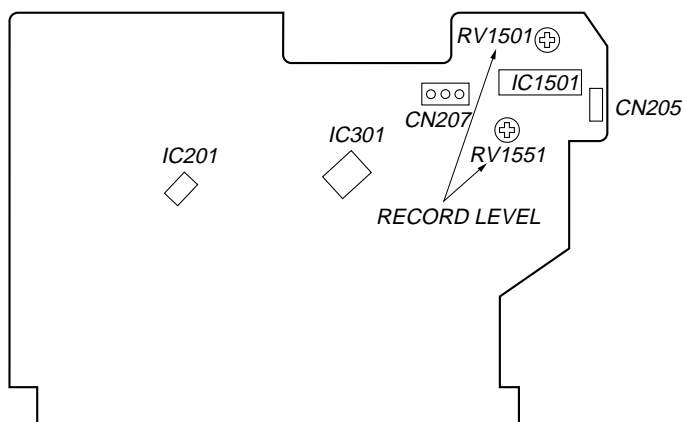
If these levels do not adjustable limits, adjustment the RV1501 (L-CH) and RV1551 (R-CH) on the main board to repeat steps 1 and 2.

Adjustable limits:

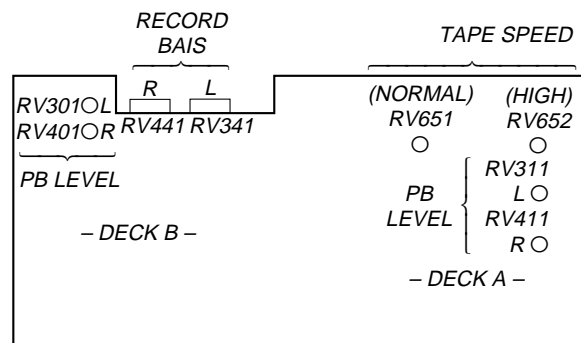
CN207 PB level: 47.3 to 53.1 mV (−24.3 to −23.3 dB)

Adjustment Location: main board

[MAIN BOARD] (Component Side)



[AUDIO BOARD] (Conductor Side)



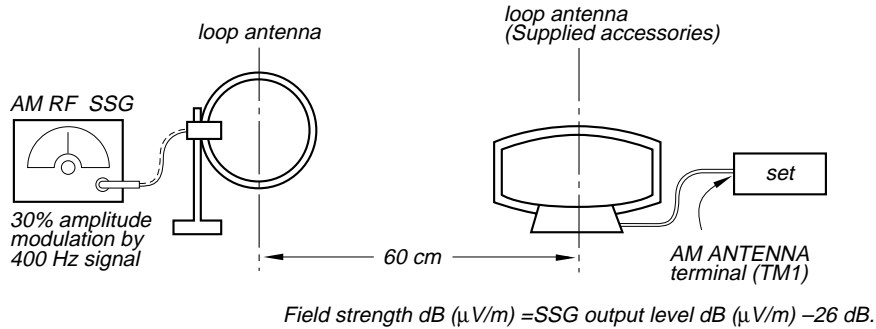
TUNER SECTION

0dB=1μV

Note: As a front-end (FE1) is difficult to repair if faulty, replace it with new one.

AM Section Adjustment

Setting:



AM Tuned Level Adjustment

Band: AM or MW

Procedure:

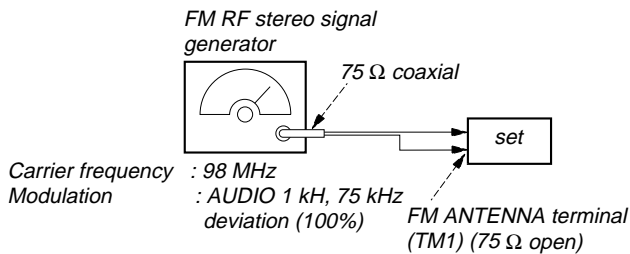
1. Set the output of SSG so that the input level of the set becomes 55 dB.
2. Tune the set to 1,050 kHz (US, CND models), 999 kHz (other models).
3. Adjust RV41 (AEP, UK models), RV42 (other models) to the point (moment) when the TUNED indicator will change from going off to going on.

Adjustment Location : TCB board

FM Section Adjustment

Note: This adjustment should be performed after the AM Tuned Level Adjustment due to the same adjustment element.

Setting:



FM Tuned Level Adjustment

Band: FM

Procedure:

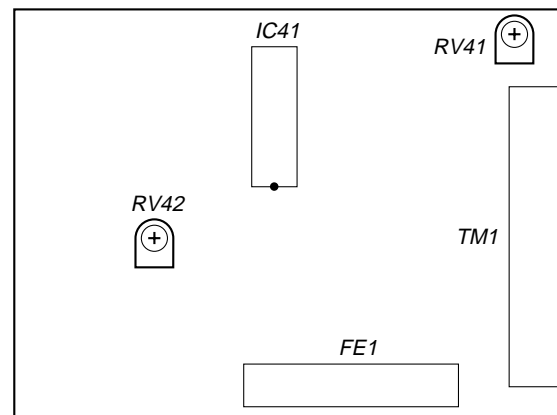
1. Supply a 25dBμ 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. If the TUNED indicator does not light, adjust RV42 (AEP, UK models), RV41 (other models) to the point (moment) when the TUNED indicator will change from going off to going on.

Adjustment Location: TCB board

Adjustment Location:

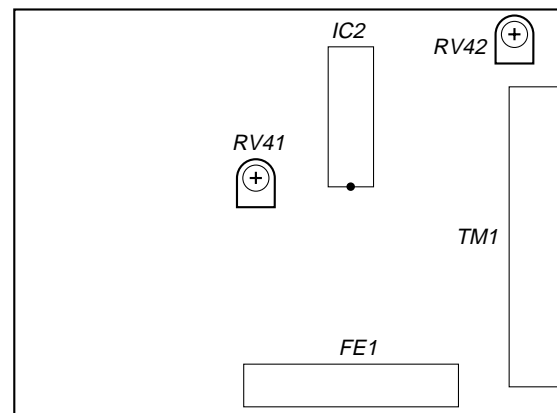
AEP, UK model

[TCB BOARD] (Component Side)



Other model

[TCB BOARD] (Component Side)



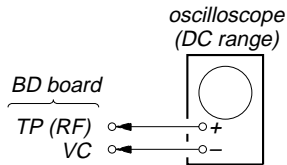
- Abbreviation
CND: Canadian model

CD SECTION

Note:

1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10M impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Adjust the focus bias adjustment when optical block is replaced.

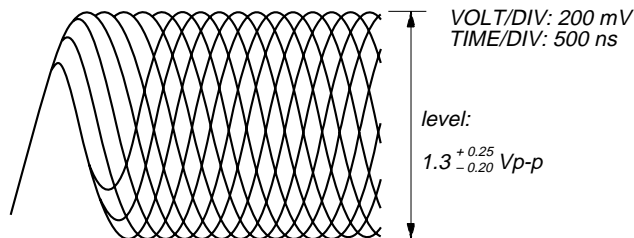
Focus Bias check



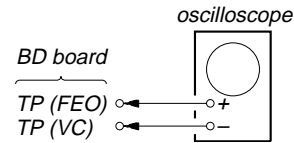
Procedure:

1. Connect oscilloscope to test point TP (RF). (GND terminal : VC)
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that the shape “◇” can be clearly distinguished at the center of the waveform and check the RF signal level.

• RF signal



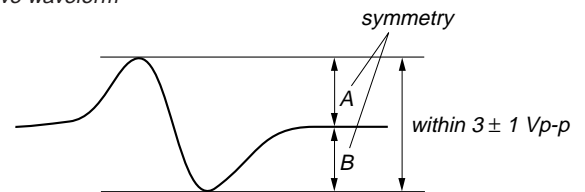
S Curve Check



Procedure:

1. Connect oscilloscope to test point TP (FEO).
2. Connect between test point TP (FOK) and GND by lead wire.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3 ± 1 Vp-p.

S-curve waveform

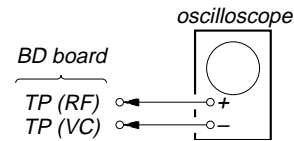


6. After check, remove the lead wire connected in step 2.

Note: • Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.

- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check



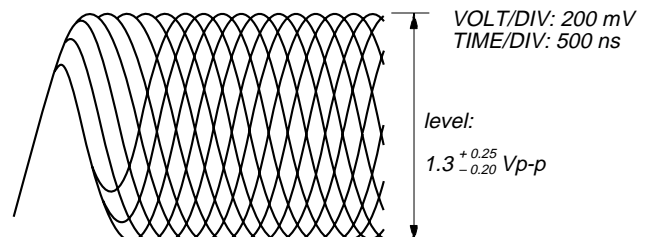
Procedure:

1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

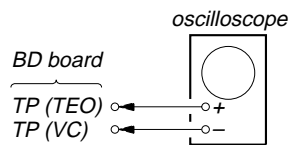
Note:

Clear RF signal waveform means that the shape “◇” can be clearly distinguished at the center of the waveform.

• RF signal



E-F Balance (1 Track Jump) check
(Without remote commander)



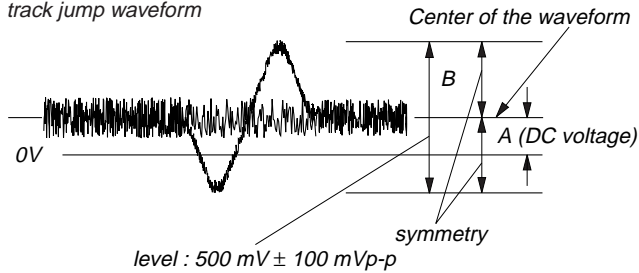
Procedure:

1. Connect oscilloscope to test point TP (TEO) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in to play the number five track.
4. Press the “||| (Pause)” button. (Becomes the 1 track jump mode)
5. Check the level B of the oscilloscope's waveform and the A (DC voltage) of the center of the Traverse waveform.

Confirm the following:

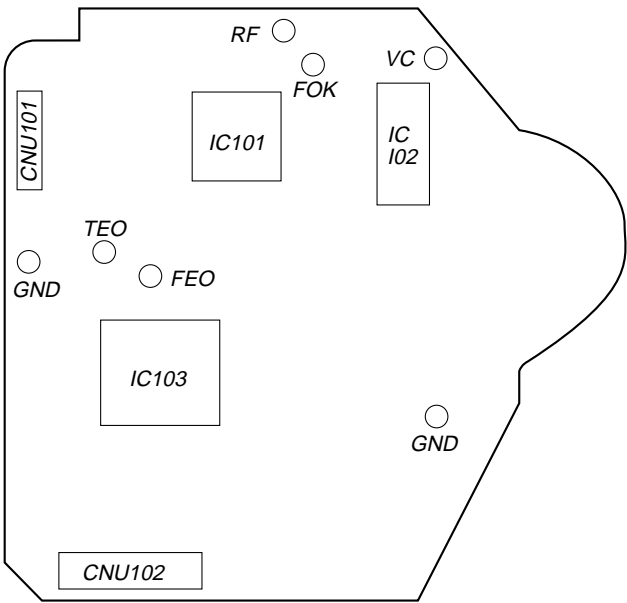
$$\frac{A - B}{2 (A + B)} \times 100 = \pm 7 (\%)$$

1 track jump waveform



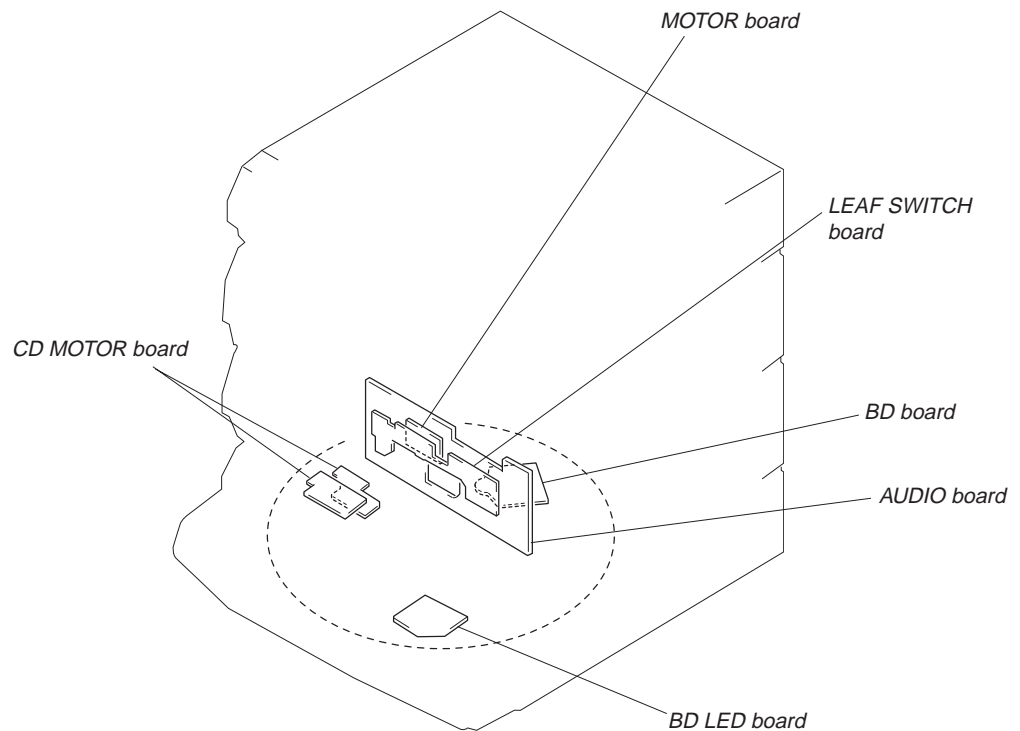
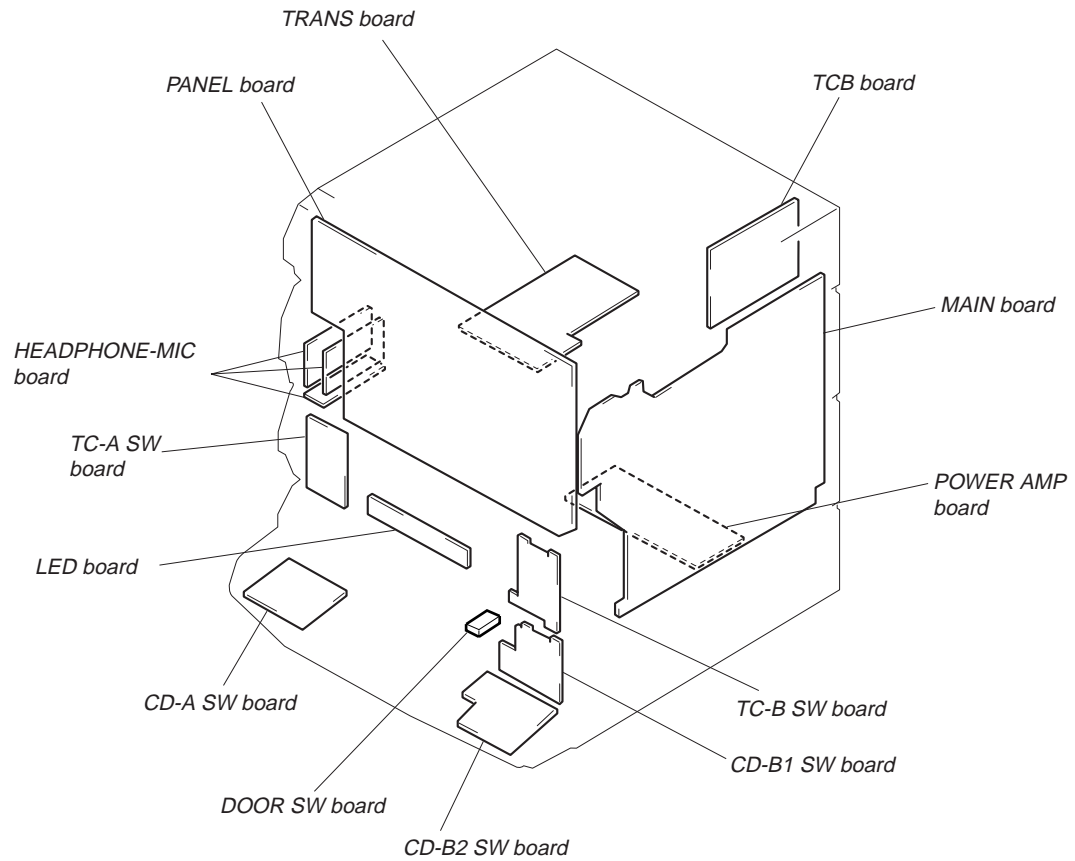
Adjustment Location:

[BD BOARD] (Conductor Side)



SECTION 6 DIAGRAMS

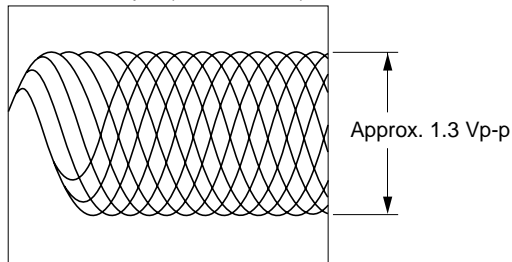
• Circuit Board Location



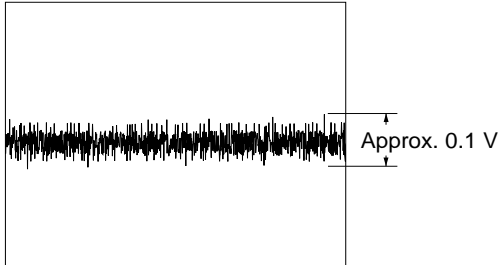
• Waveforms

— BD Section—

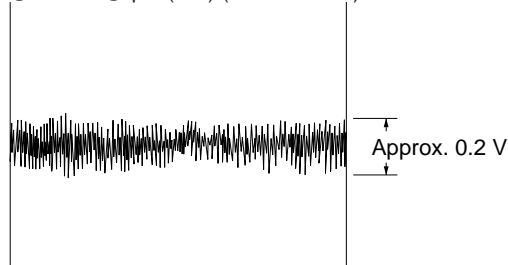
① IC101 ③③ pin (PLAY MODE)



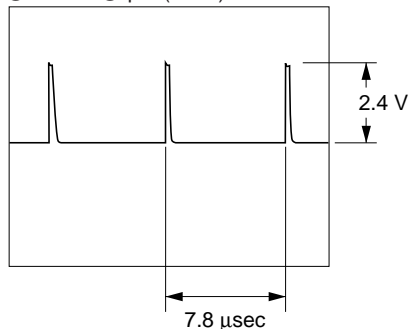
② IC101 ② pin (FEI) (PLAY MODE)



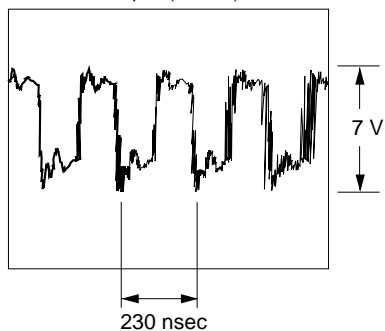
③ IC101 ④⑦ pin (TEI) (PLAY MODE)



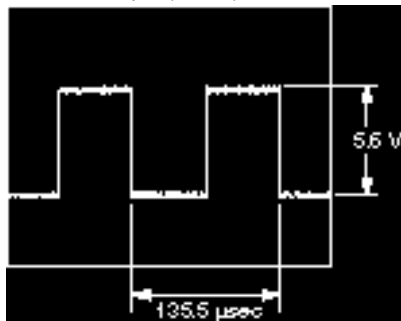
④ IC103 ②⑦ pin (MDP)



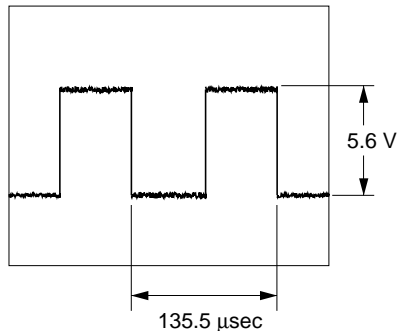
⑤ IC103 ⑥⑩ pin (XPCK)



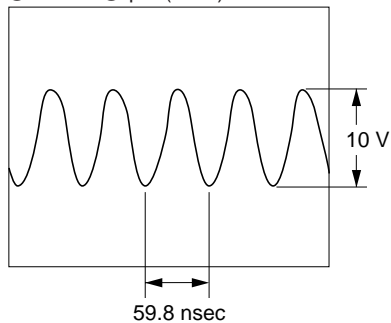
⑥ IC103 ⑥② pin (RFCK)



⑦ IC103 ⑦④ pin (WFCK)

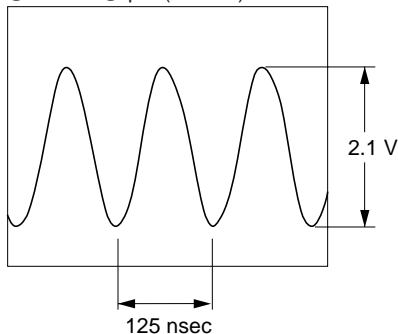


⑧ IC103 ⑧⑨ pin (XTAI)



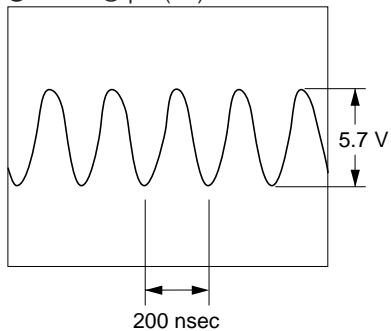
— PANEL Section—

⑨ IC601 ⑧ pin (X-OUT)

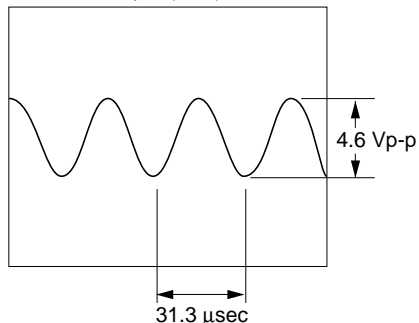


— MAIN Section—

⑩ IC301 ⑩ pin (X2)

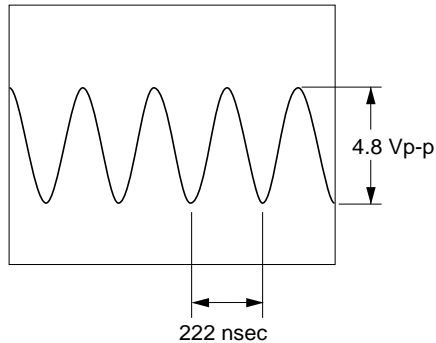


⑪ IC301 ⑬ pin (XT2)

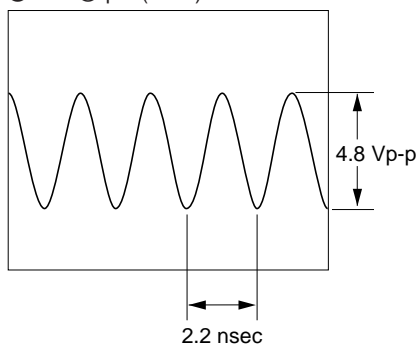


— TUNER Section—

⑫ IC1 ②④ pin (XOUT)

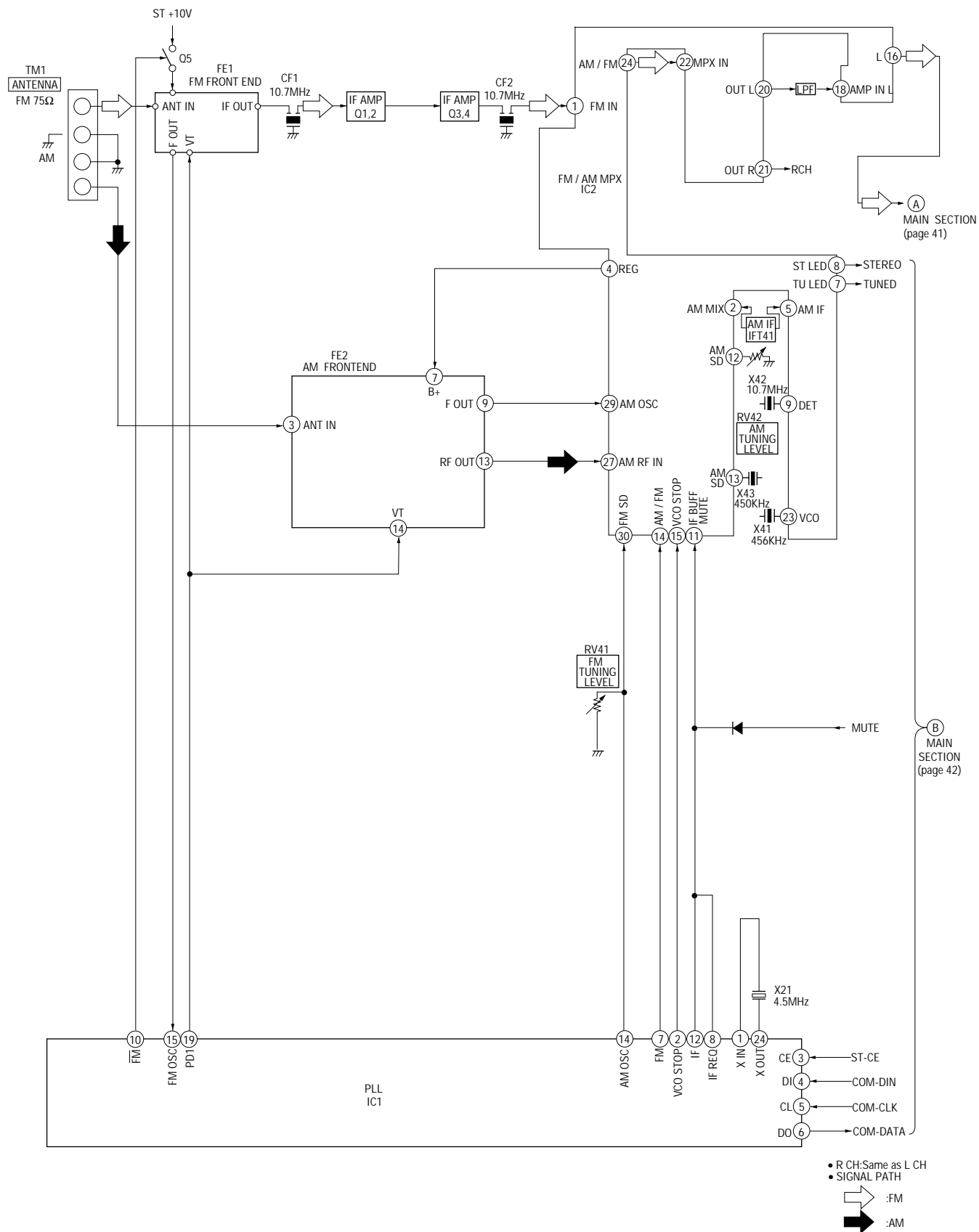


⑬ IC2 ②③ pin (VCO)



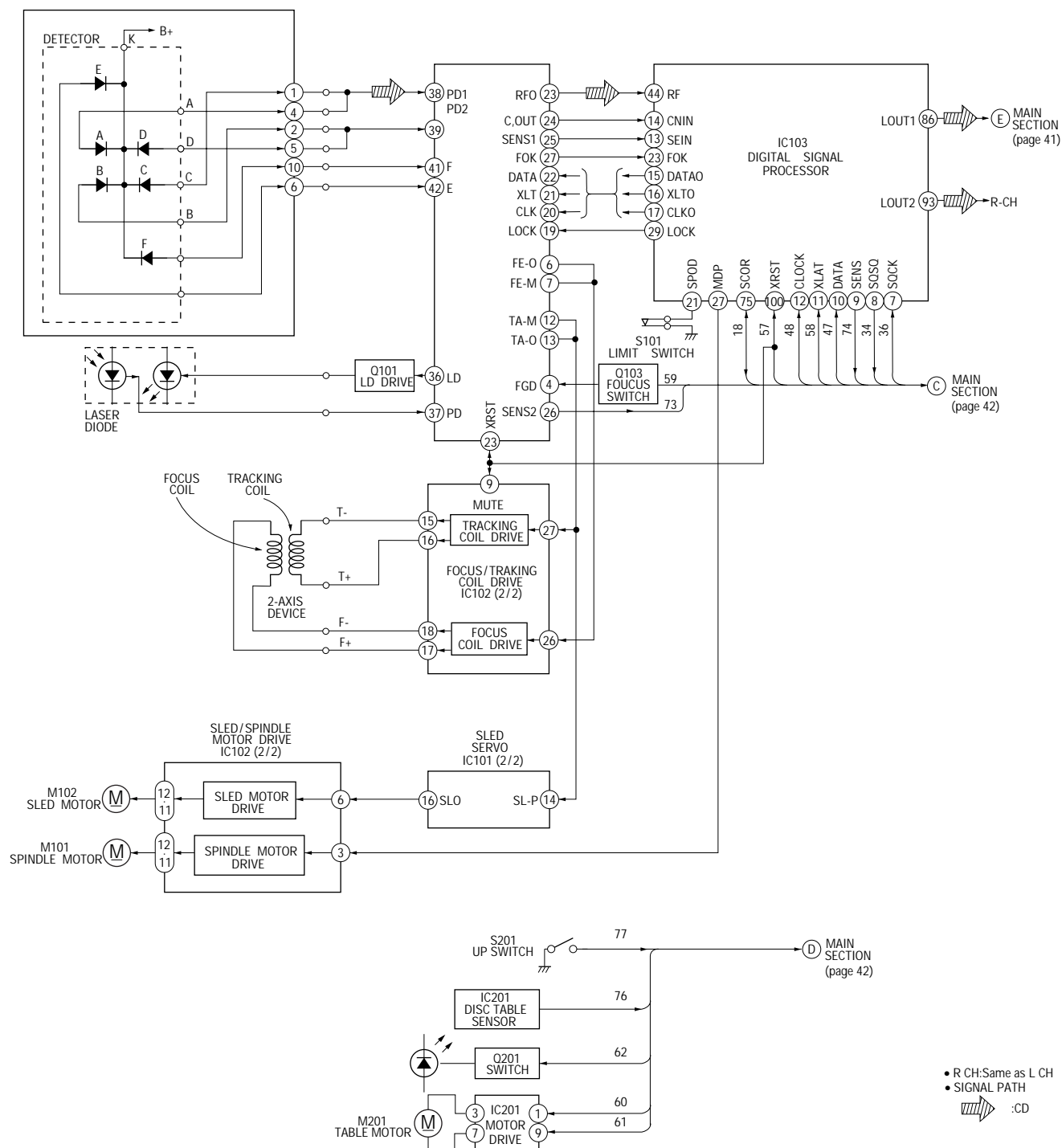
6-1. BLOCK DIAGRAMS

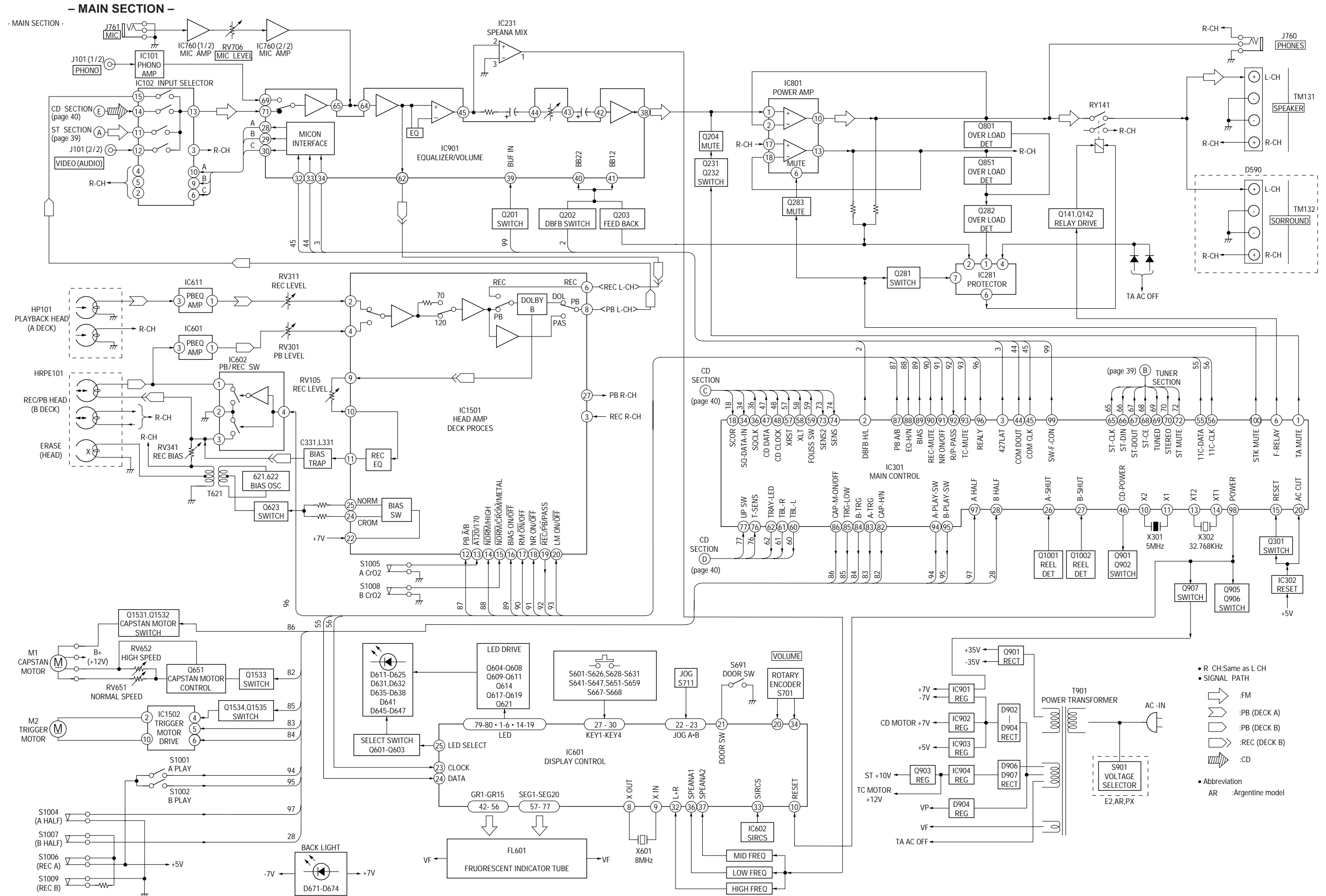
- TUNER SECTION -



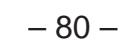
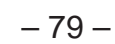
- CD SECTION -

- CD SECTION -
OPTICAL PICK-UP BLOCK



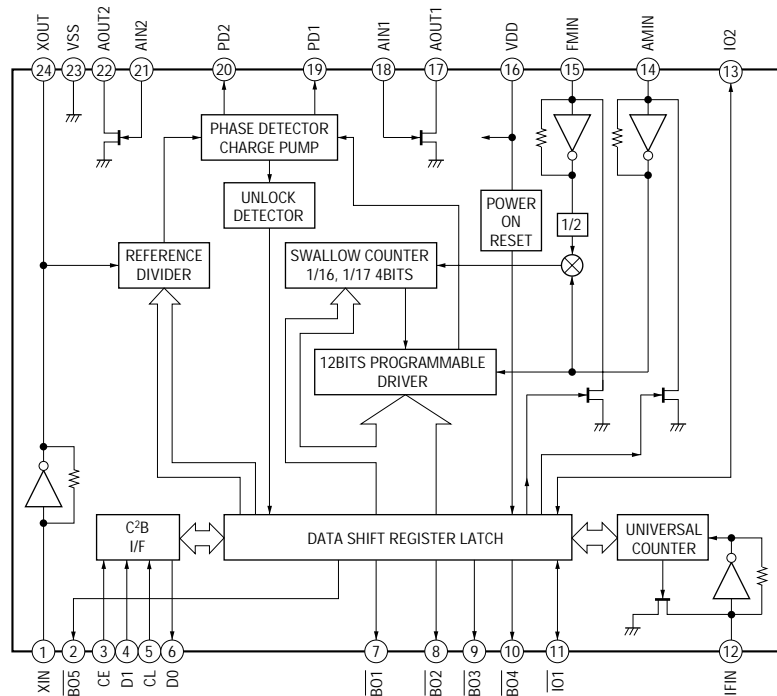


IC101 CXA1992AR

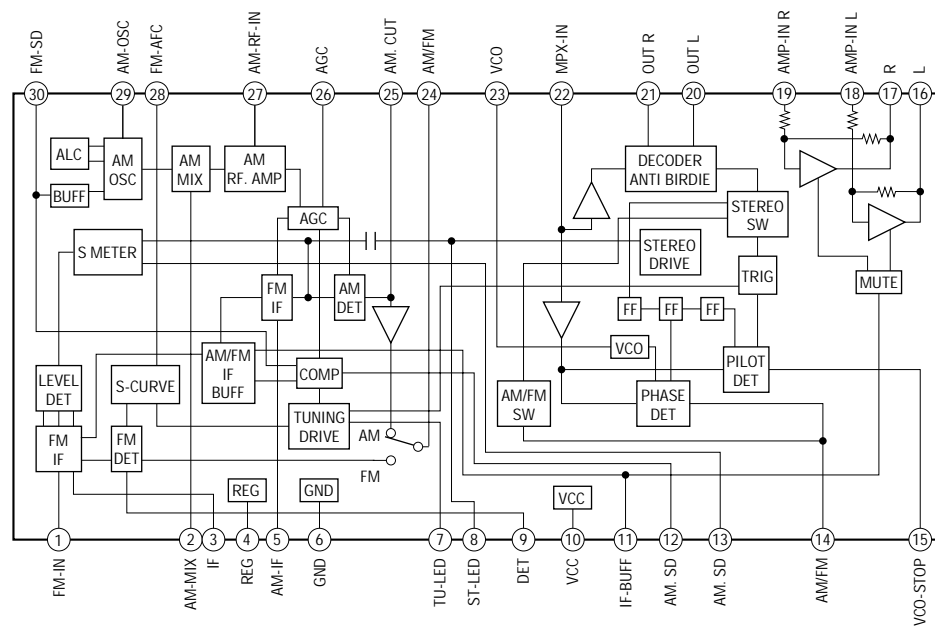


– TUNER section –

IC1 LC72130



IC2 LA1835



6-16. IC PIN FUNCTION DESCRIPTION

MAIN BOARD IC301 μ PD780018Y (MAIN CONTROL)

Pin No.	Pin Name	I/O	Function
1	TA-MUTE	O	Line mute signal output
2	DBFB-H/L	O	DBFB H/L select signal output
3	427-LT	O	Latch signal output for IC201 (62427)
4	KCON-LT	O	Not used
5	KCON-ON/OFF	O	
6	F-RELAY	O	Front speaker relay control output
7	R-RELAY	O	Not used
8	PL-RELAY	O	
9	TEST	I	Connected ground
10	X2	O	X'tal (5MHz)
11	X1	I	
12	VDD	–	Power supply (+5V)
13	XT2	O	X'tal (32.768 KHz)
14	XT1	I	
15	RESET	I	Reset signal input
16	INT/IN	I	Connected ground
17	INT/IN/OUT	I	
18	SCOR	O	Subcode data request signal output
19	SOFT-TEST	O	Software test port
20	AC-CUT	I	Back up signal input
21	RDS-INT	I	Not used
22	RDS-DATA	I	
23	VDD	–	Power supply (+5V)
24	AVDD	I	Analog reference voltage input
25	ADJ	I	CD adjust point port
26	A-SHUT	I	A Deck reel pulse detector
27	B-SHUT	I	B Deck reel pulse detector
28	B-HALF	I	Half detector signal input
29	CLK-CHECK	I	Connected ground
30	SPEC-IN	I	Version select signal input
31	ADJ 2	I	Connected ground
32	DEMO-CHANGE	I	DEMO H/L select signal input
33	AVss	–	Ground
34	SQ-DATA-IN	O	Subcode Q data input
35	—	–	Not used
36	SQ-CLK	O	Sub code Q data clock input
37	SW-ON/OFF	O	Not used
38, 39	FUNC 1, 2	I	Connected ground
40	Vss	–	Ground
41	VOL-LAT	O	Not used
42	PL-LAT	O	
43	COM-DIN	I	Connected ground
44	COM-DOUT	O	Common serial data output

Pin No.	Pin Name	I/O	Function
45	COM-CLK	O	Common serial clock output
46	CD-POWER	O	CD power on signal output
47	CD-DATA	O	CD data output
48	CD-CLOCK	O	CD clock output
49	MSM-CMD	O	Not used
50	MSM-BUSY	I	Connected ground
51	MSM-LT	O	Not used
52	MSM-NAR	I	
53	MSM-CH	O	
54	INPUT-CHANGE	O	Not used
55	11C-DATA	O	Data output for IC601
56	11C-CLK	O	Clock output for IC601
57	XRST	O	CD reset signal output
58	XLT	O	CD latch signal output
59	FOUCUS-SW	O	Not used
60	TBL-L	O	Table motor control output
61	TBL-R	O	
62	TRAY-LED	O	CD tray LED ON/OFF output
63	LOAD-OUT	O	Not used
64	LOAD-IN	O	
65	ST-CLK	O	Tuner clock output
66	ST-DIN	I	Tuner data input
67	ST-DOUT	O	Tuner data output
68	ST-CE	O	Tuner chip enable output
69	TUNED	I	Tuned detection for tuner
70	STEREO	I	Stereo detection for tuner
71	Vss	–	Ground
72	ST-MUTE	O	Tuner mute signal output
73	SENS2	I	BD Condition signal input
74	SENS	I	
75	DISC-SENS	I	Not used
76	T-SENS	I	CD table detection signal input
77	UP-SW	I	Up SW (S201) signal input
78	ENC 3	I	Not used
79	ENC 2	I	
80	ENC 1	I	
81	OUT-OPEN	I	Not used
82	CAP-M-H/N	O	Capstan motor H/N speed select signal output
83	B-TRG	O	Trigger motor control output
84	A-TRG	O	Trigger motor control output
85	TRG-LOW	O	Trigger motor control output
86	CAP-M-ON/OFF	O	Capstan motor ON/OFF signal output
87	PB-A/B	O	PB Deck A/Deck B select output

Pin No.	Pin Name	I/O	Function
88	EQ-H/N	O	Equalizer H/N select output
89	BIAS	O	Bias ON/OFF signal output
90	REC-MUTE	O	REC mute ON/OFF selection output
91	NR-ON/OFF	O	NR ON/OFF signal output
92	R/P-PASS	I	REC/PB/PASS selection output
93	TC-MUTE	O	TC mute ON/OFF selection output
94	A-PLAY-SW	I	Deck A play detect
95	B-PLAY-SW	I	Deck B play detect
96	TC-RELAY	O	REC/PB head selection output for IC602
97	A-HALF	I	Deck A cassette detect
98	POWER	O	POWER ON/OFF signal output
99	SW-F-CHG	O	Super woofer mode signal output
100	STK-MUTE	O	Power amplifier ON/OFF signal output

PANEL BOARD IC601 TMP87CH74 (DISPLAY CONTROL)

Pin No.	Pin Name	I/O	Function
1-6	LED3-LED8	O	LED driver output
7	VSS	–	Ground
8	X-OUT	O	X'tall (8MHz)
9	X-IN	I	
10	RESET	I	Reset signal input from main controller
11	LED 9	O	Connected ground
12	LED10	O	
13	TEST	I	
14-19	LED11-LED19	O	LED driver output
20	VOL-A	I	Rotary encoder (S701 VOLUME) pulse input
21	DOOR SW	I	DOOR SW (S651) ON/OFF signal input
22	JOG-A	I	Rotary encoder (S711 AMS) pulse input
23	CLOCK	I	Serial clock input from main controller
24	DATA	I	Serial data input from main controller
25	LED SELECT	O	LED select signal output
26	MODEL	I	Version select signal input
27-30	KEY1-KEY4	I	Key input
31	SPEANA-3	I	Connected ground
32	L + R	I	Spectrum analyzer (high frequency) input
33	SIRCS	I	Remote commander signal input
34	VOL-B	I	Rotary encoder (S701 VOLUME) pulse input
35	JOG-B	I	Rotary encoder (S711 AMS) pulse input
36	SPEANA-1	I	Spectrum analyzer (Low frequency) input
37	SPEANA-2	I	Spectrum analyzer (Middle frequency) input
38	VASS	–	Ground
39	VAREF	I	Analog reference voltage input
40	VDD	–	Power supply (+5V)
41	—	–	Not used
42-56	GR1-GR15	O	FL gride signal output
57-77	SEG1-SEG77	O	FL segment signal output
78	VKK	–	–30V driving power for FL
79, 80	LED1-LED2	O	LED driver output

SECTION 7

EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts

Example:

KNOB, BALANCE (WHITE) . . . (RED)

↑ ↑

Parts Color Cabinet's Color

- Abbreviation



AR: Argentine CND: Canadian


AUS: Australian MX: Mexican

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.

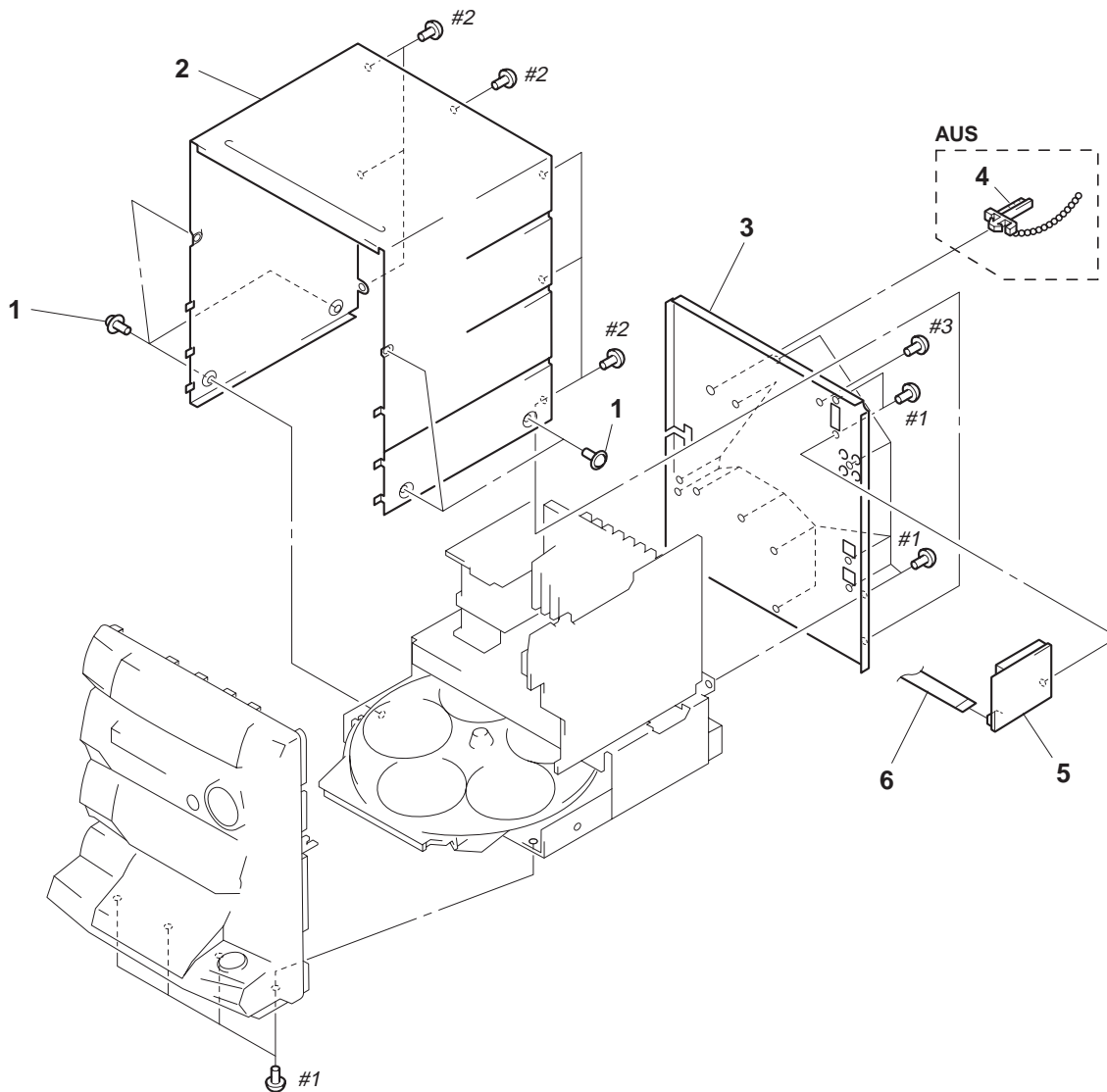
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque  sont critiques pour la sécurité.

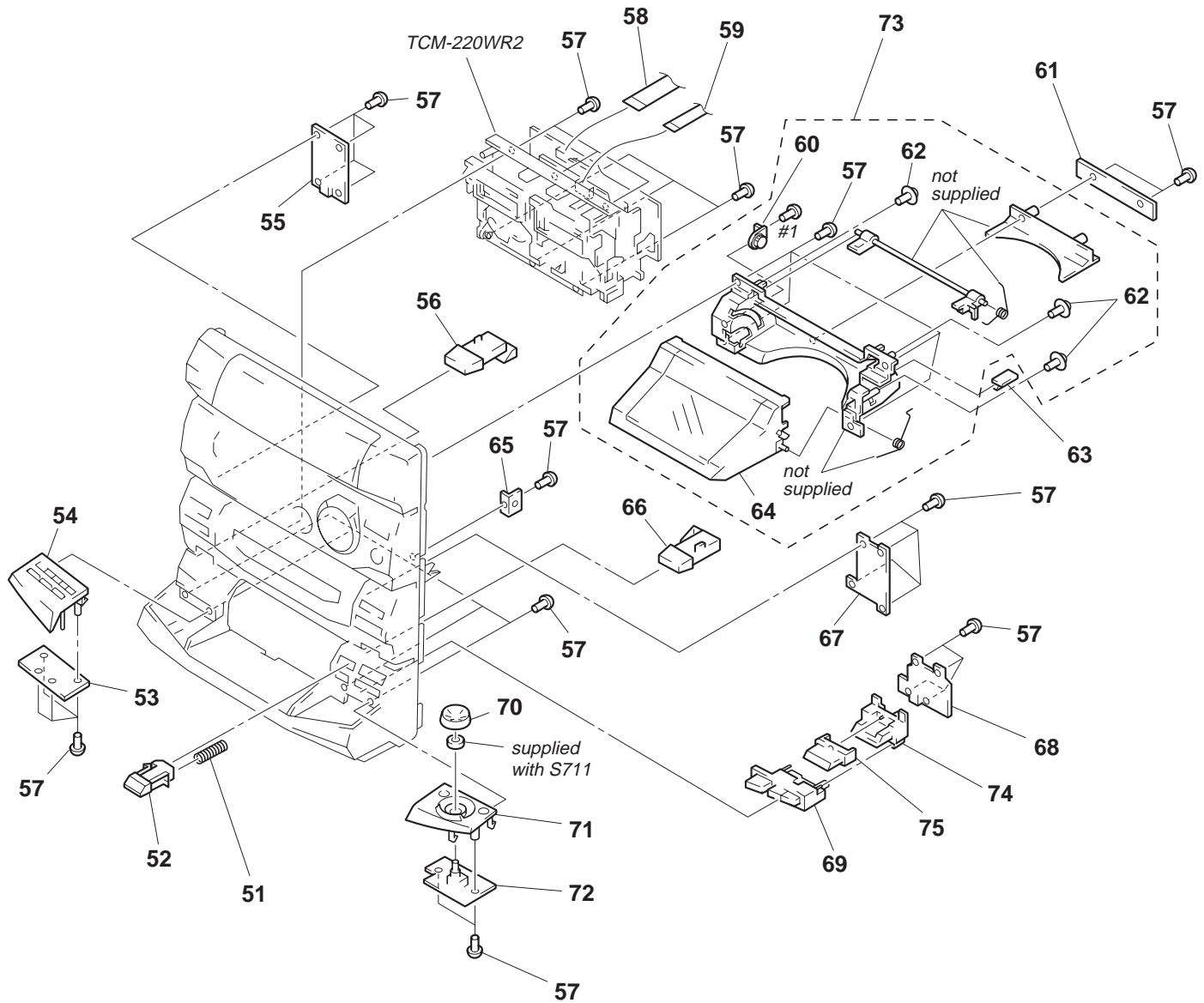
Ne les remplacer que par une pièce portant le numéro spécifié.

(1) CASE, REAR PANEL SECTION



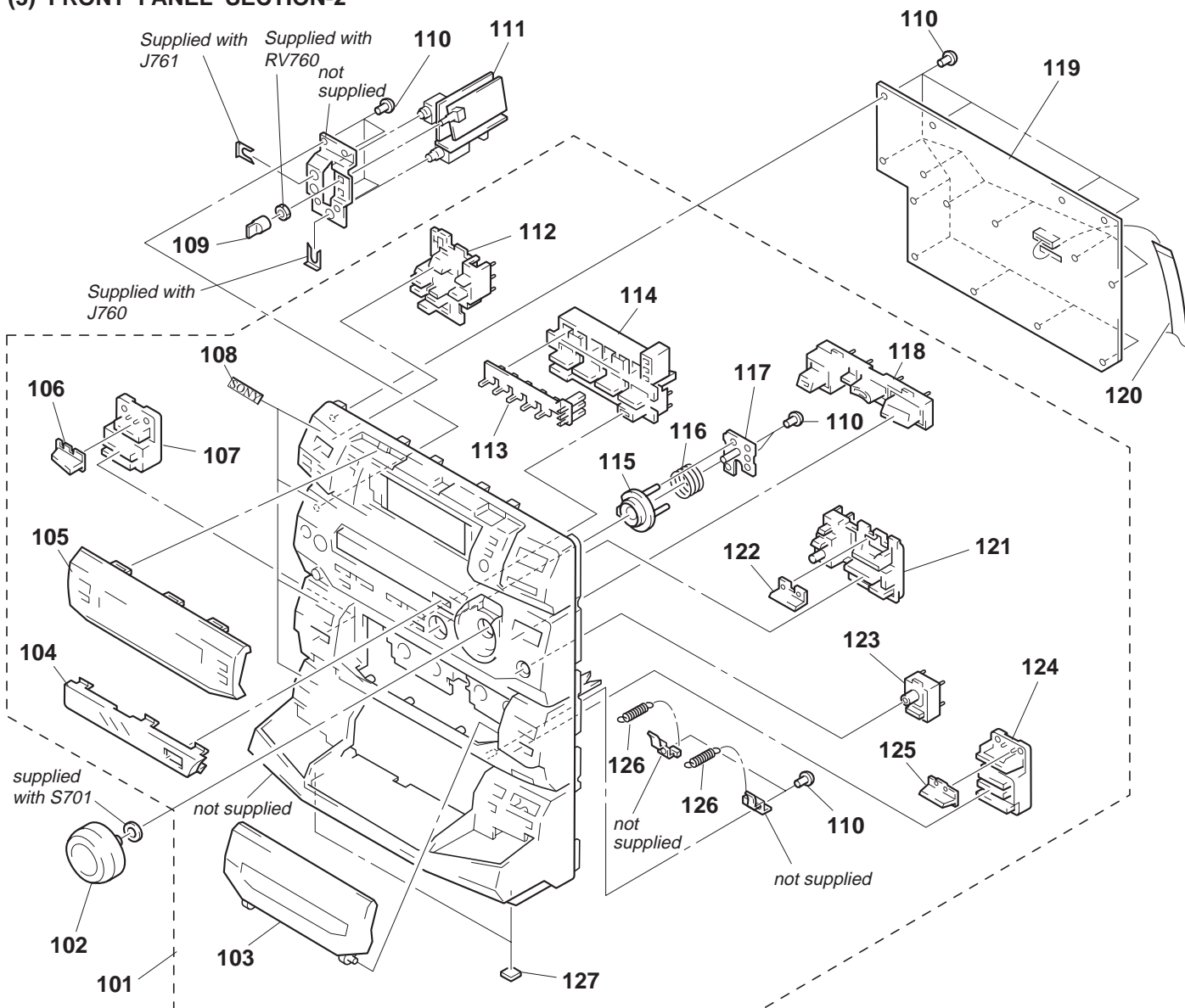
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-929-973-01	SCREW (CASE, 3 POINT)		4	4-956-370-12	BAND, PLUG FIXED (AUS)	
* 2	4-987-052-11	CASE		* 5	A-4303-510-A	TCB BOARD, COMPLETE (US, CND)	
* 3	4-987-043-71	PANEL, BACK (US)		* 5	A-4303-512-A	TCB BOARD, COMPLETE (EXCEPT US, CND)	
* 3	4-987-043-81	PANEL, BACK (CND)		6	1-769-974-11	WIRE (FLAT TYPE) (13 CORE)	
* 3	4-987-927-01	PANEL, BACK (EXCEPT US, CND)					

(2) FRONT PANEL SECTION-1



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-987-995-01	SPRING (CD EJECT), COMPRESSION		* 63	1-664-016-11	DOOR SW BOARD	
52	4-987-001-01	BUTTON (EJECT CD)		64	4-987-038-01	LID, DISC	
* 53	1-664-009-11	CD-A SW BOARD		* 65	4-987-933-01	BRACKET (TA)	
54	X-4948-295-1	PANEL (A) SUB ASSY (US, CND)		66	4-987-000-01	BUTTON (EJECT B)	
54	X-4948-348-1	PANEL (A) SUB ASSY (EXCEPT US, CND)		* 67	1-664-013-11	TC-B SW BOARD	
* 55	1-664-012-11	TC-A SW BOARD		* 68	1-664-010-11	CD-B1 SW BOARD	
56	4-986-999-01	BUTTON (EJECT A)		69	X-4947-969-1	BUTTON (CD STOP) ASSY	
57	4-951-620-01	SCREW (2.6X8), +BVTP		70	4-987-037-01	KNOB (JOG)	
58	1-773-161-11	WIRE (FLAT TYPE) (21 CORE)		71	X-4948-296-1	PANEL (B) SUB ASSY	
59	1-769-949-11	WIRE (FLAT TYPE) (11 CORE)		* 72	1-664-011-11	CD-B2 SW BOARD	
60	3-354-963-01	DAMPER		73	A-4384-396-A	LID ASSY, CD	
* 61	1-664-017-11	LED BOARD		74	4-987-002-01	BUTTON (CD, PLAY)	
62	4-957-577-01	SCREW PTP WH (2.6X8) (DIA. 10)		75	4-987-014-01	INDICATOR (CD)	

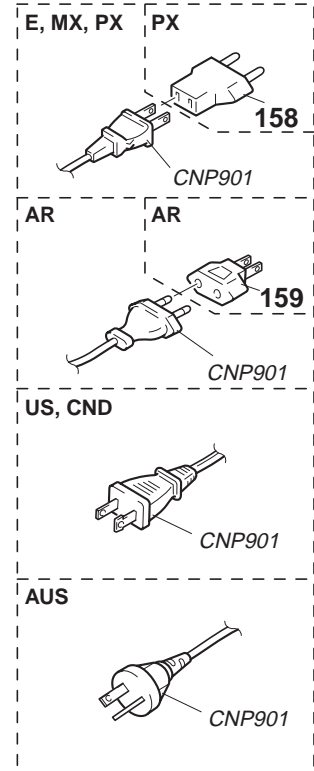
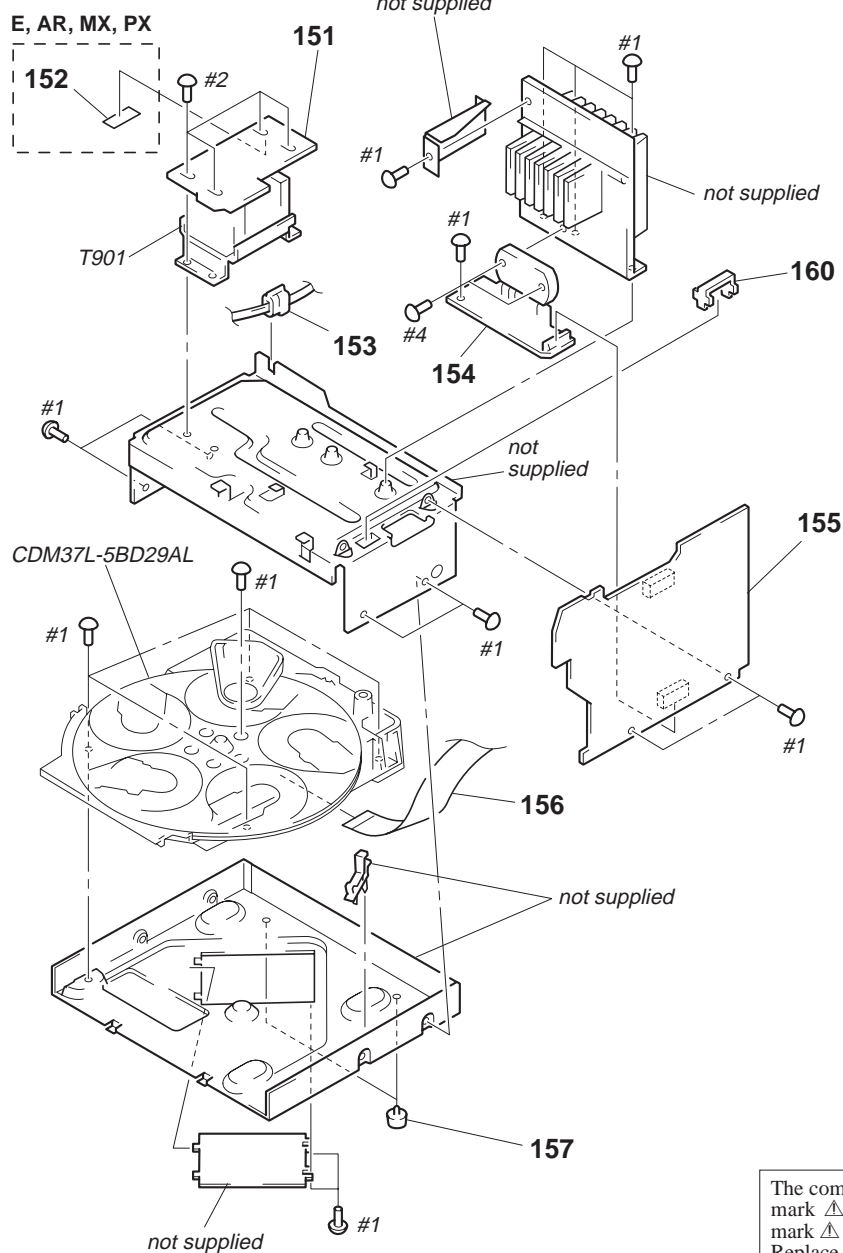
(3) FRONT PANEL SECTION-2



Ref. No.	Part No.	Description	Remark
101	A-4384-413-A	PANEL ASSY, FRONT (US, CND)	
101	A-4384-414-A	PANEL ASSY, FRONT (EXCEPT US, CND)	
102	4-987-036-01	KNOB (VOL)	
103	X-4947-961-1	LID ASSY, CASSETTE	
104	4-987-032-01	DISPLAY (TA)	
105	4-987-028-01	DISPLAY (ST)	
106	4-987-021-01	INDICATOR (TC A)	
107	4-986-997-01	BUTTON (DECK.A)	
108	4-963-404-21	EMBLEM (5-A), SONY	
109	4-973-644-01	KNOB (MIC)	
110	4-951-620-01	SCREW (2.6X8), +BVTP	
* 111	A-4392-452-A	HEADPHONE-MIC BOARD, COMPLETE	
112	4-986-986-01	BUTTON (POWER)	
113	4-987-012-01	INDICATOR (TA)	

Ref. No.	Part No.	Description	Remark
114	X-4947-964-1	BUTTON (SOUND) ASSY	
115	4-986-990-01	BUTTON (CURSOR)	
116	4-978-683-01	SPRING, COMPRESSION	
* 117	4-987-041-01	COVER, CURSOR	
118	X-4947-963-1	BUTTON (FUNCTION) ASSY	
* 119	A-4392-477-A	PANEL BOARD, COMPLETE	
120	1-773-051-11	WIRE (FLAT TYPE) (17 CORE)	
121	X-4947-962-1	BUTTON (TUNER) ASSY	
122	4-987-013-01	INDICATOR (TUNER)	
123	X-4947-968-1	BUTTON (WOOFER) ASSY	
124	X-4947-967-1	BUTTON (DECK B) ASSY	
125	4-987-022-01	INDICATOR (TC B)	
126	4-987-996-01	SPRING (TC LID), TENSION	
127	4-948-236-01	CUSHION (107)	

(4) CHASSIS SECTION

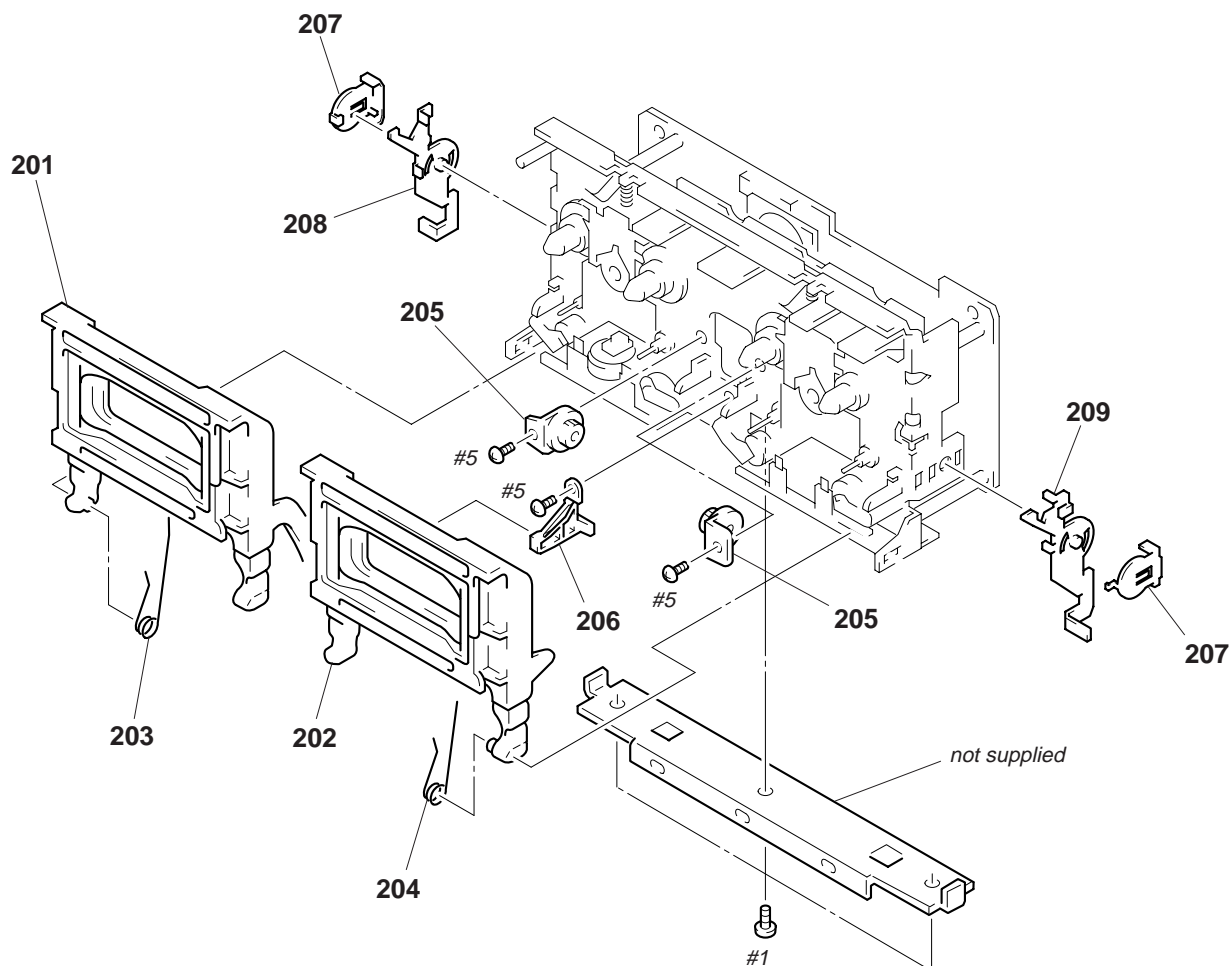


The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

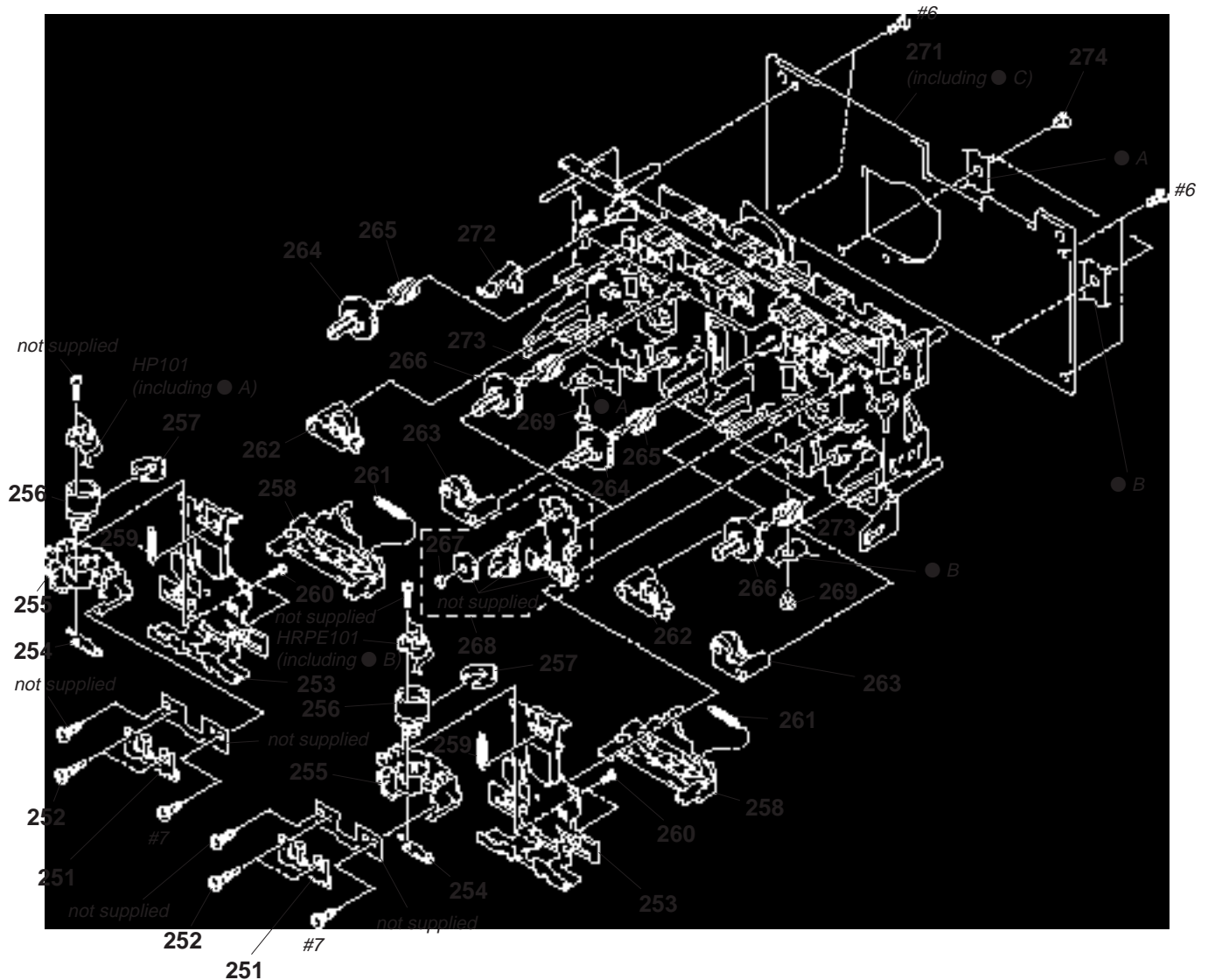
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 151	1-664-014-11	TRANS BOARD		157	X-4941-228-1	FOOT (F22125H-M)	
152	3-701-948-20	LABEL (T4A), FUSE (E, AR, MX, PX)		Δ 158	1-569-007-11	ADAPTOR, CONVERSION 2P (PX)	
153	3-703-244-00	BUSHING (FBS001), CORD (US, CND)		Δ 159	1-569-008-11	ADAPTOR, CONVERSION 2P (AR)	
153	4-966-266-01	BUSHING (S) (FBS002), CORD (EXCEPT US, CND)		* 160	4-988-533-11	HOLDER, PCB	
* 154	A-4392-442-A	POWER AMP BOARD, COMPLETE (US, CND)		Δ CNP901	1-558-943-41	CORD, POWER (E, MX, PX)	
* 154	A-4392-460-A	POWER AMP BOARD, COMPLETE (EXCEPT US, CND)		Δ CNP901	1-575-042-21	CORD, POWER (US, CND)	
* 155	A-4392-474-A	MAIN BOARD, COMPLETE (US, CND)		Δ CNP901	1-575-651-21	CORD, POWER (AR)	
* 155	A-4392-479-A	MAIN BOARD, COMPLETE (E, AR, MX)		Δ CNP901	1-696-845-11	CORD, POWER (AUS)	
* 155	A-4392-709-A	MAIN BOARD, COMPLETE (AUS, PX)		Δ T901	1-431-046-11	TRANSFORMER, POWER (US, CND)	
156	1-777-868-11	WIRE (FLAT TYPE) (19 CORE)		Δ T901	1-431-048-11	TRANSFORMER, POWER (EXCEPT US, CND)	

(5) TAPE MECHANISM DECK SECTION-1
(TCM-220WR2)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	X-4947-943-1	HOLDER (L) ASSY, CASSETTE		* 206	4-980-439-01	FULCRUM, HOLDER	
202	X-4947-944-1	HOLDER (R) ASSY, CASSETTE		207	3-354-957-01	JOINT (LOCK LEVER)	
203	4-959-231-11	SPRING (L), TORSION		208	3-354-953-01	LEVER (LOCK LEVER L)	
204	4-959-232-11	SPRING (R), TORSION		209	3-354-954-01	LEVER (LOCK LEVER R)	
205	3-354-963-01	DAMPER					

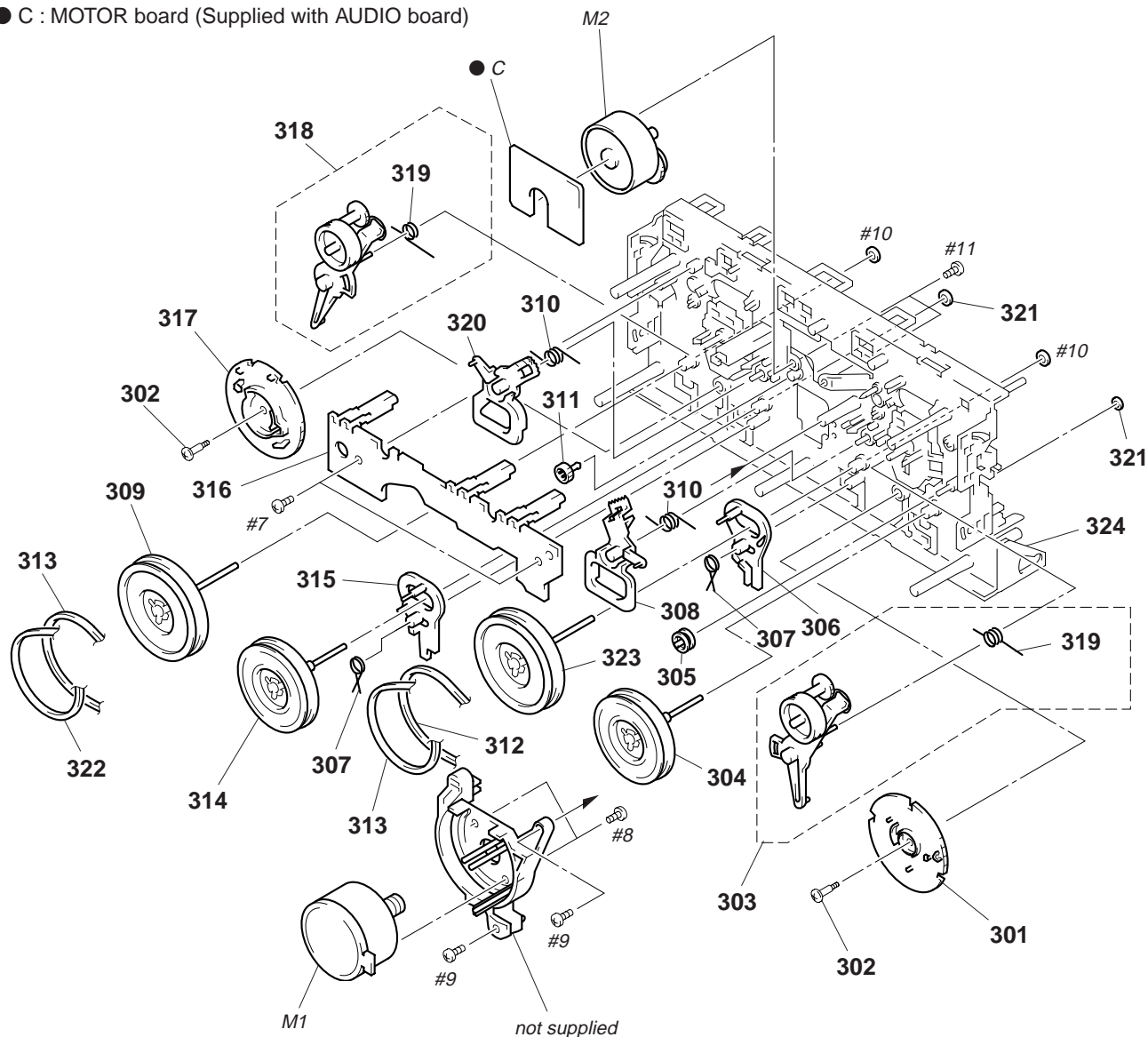
(6) TAPE MECHANISM DECK SECTION-2
(TCM-220WR2)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	3-908-560-01	SPRING, AZIMUTH ADJUSTMENT		264	3-908-613-01	GEAR (S), REEL	
252	3-919-684-01	SCREW, AZIMUTH ADJUSTMENT		265	3-917-141-01	SPRING, COMPRESSION	
253	X-3373-113-1	SLIDER (HEAD) ASSY		266	X-3371-305-1	REEL (T) ASSY	
254	3-908-556-01	SPRING, HEAD TOGGLE		267	3-669-465-01	WASHER (1.5), STOPPER	
255	3-908-558-02	FITTING BLOCK, HEAD		268	X-3370-173-1	TU ASSY	
256	3-908-557-02	ROTARY BLOCK, HEAD		269	3-911-116-21	RIVET, PUSH	
* 257	3-908-559-01	STOPPER, AZIMUTH		* 271	A-2007-131-A	AUDIO BOARD, COMPLETE	
258	3-908-555-01	SLIDER (REV SLIDER)		272	3-930-972-01	DETENT, HALF	
259	3-917-143-11	SPRING, TENSION		273	3-917-142-01	SPRING, COMPRESSION	
260	3-388-848-01	SCREW (P2X6) (B TIGHT)		274	3-911-116-11	RIVET, PUSH	
261	3-939-371-01	SPRING (1), TENSION		HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK) (DECK A)	
262	X-3369-909-1	PINCH LEVER (REV) ASSY		HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE) (DECK B)	
263	X-3369-908-1	PINCH LEVER (FWD) ASSY					

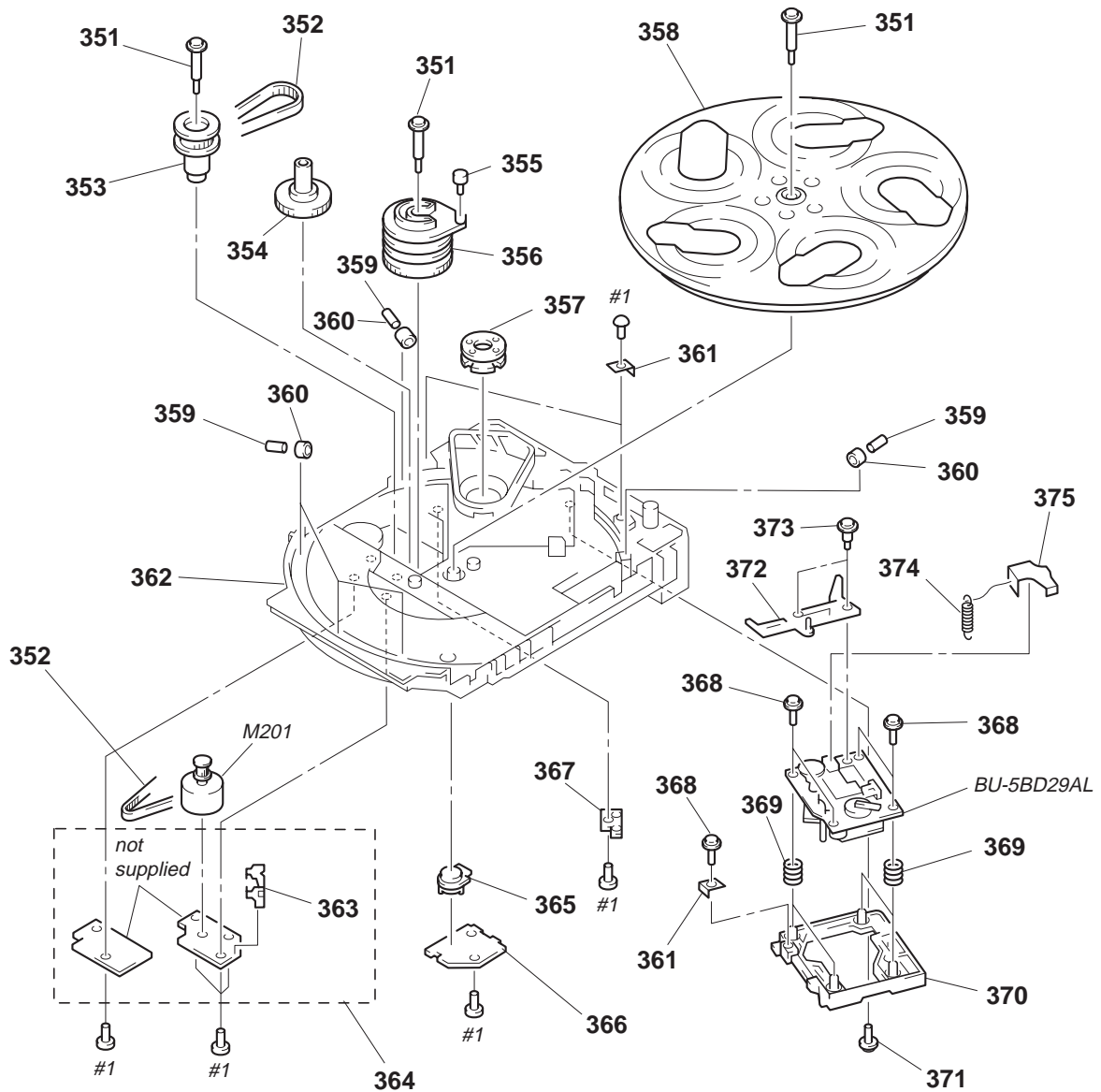
(7) TAPE MECHANISM DECK SECTION-3 (TCM-220WR2)

● C : MOTOR board (Supplied with AUDIO board)



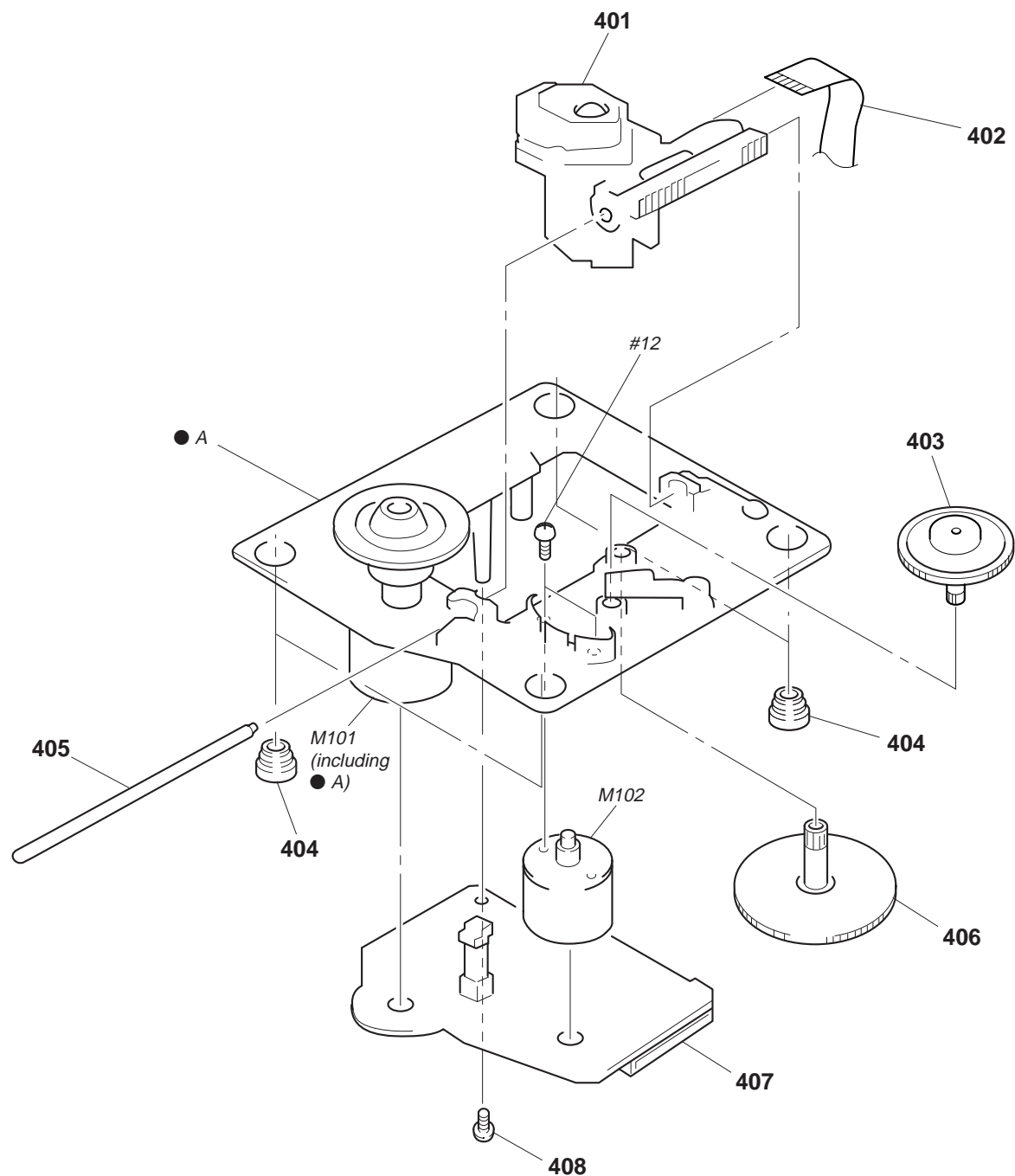
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	3-908-597-01	CAM (A)		314	X-3370-171-1	FLYWHEEL (BR) ASSY	
302	3-908-608-11	SCREW, STEP		315	3-908-600-01	LEVER (REV-B)	
303	X-3372-930-1	ARM (A) ASSY, FR		* 316	1-650-669-11	LEAF SWITCH BOARD	
304	X-3370-169-1	FLYWHEEL (AR) ASSY		317	3-908-598-01	CAM (B)	
305	3-928-047-01	PULLEY, TENSION		318	X-3372-931-1	ARM (B) ASSY, FR	
306	3-908-599-01	LEVER (REV-A)		319	3-914-111-01	SPRING (FR), TORSION	
307	3-908-601-01	SPRING (REV LEVER), TORSION		320	3-908-604-01	LEVER (TRIGGER B)	
308	3-908-603-01	LEVER (TRIGGER A)		321	3-911-115-01	WASHER, STOPPER	
309	X-3367-593-1	FLYWHEEL (BF) ASSY		322	3-917-176-11	BELT (B)	
310	3-908-605-01	SPRING (TRIGGER), TORSION		323	X-3370-172-1	FLYWHEEL (AF) ASSY	
311	3-908-609-01	GEAR, TRIGGER		324	X-3371-441-1	CHASSIS ASSY, MECHANICAL	
312	3-913-845-11	BELT (A)		M1	X-3371-223-1	MOTOR ASSY, CAPSTAN	
313	3-913-846-11	BELT (FR)		M2	A-2004-410-A	MOTOR ASSY, DC (TRIGGER)	

(8) CD MECHANISM DECK SECTION
(CDM37L-5BD29AL)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
351	4-987-976-01	SCREW, STEP		* 364	A-4673-765-A	CD MOTOR BOARD, COMPLETE	
352	4-944-490-01	BELT (TIMING)		365	4-978-426-01	INDICATOR (NO.)	
353	A-4660-978-A	GEAR (PULLEY) ASSY		* 366	1-659-059-13	BD LED BOARD	
354	4-978-421-01	GEAR (MID)		* 367	1-659-058-13	TABLE SENSOR BOARD	
355	4-978-425-01	ROLLER (CAM)		368	4-933-134-01	SCREW (+PTPWH M2.6X6)	
356	4-978-420-01	CAM (HOLDER)		369	4-958-593-01	SPRING (BU), COMPRESSION	
357	1-452-538-11	MAGNET		* 370	4-978-419-01	HOLDER (BU-5)	
358	4-978-417-01	TABLE, DISC		371	4-917-583-71	BRACKET, YOKE	
359	4-934-376-01	SHAFT (ROLLER)		372	4-989-493-01	SLIDER (37)	
360	X-4924-457-1	ROLLER ASSY		373	4-989-494-01	SCREW (SLIDER), STEP	
* 361	4-978-583-01	BRACKET (BU)		374	4-989-819-01	SPRING, TENSION	
* 362	4-978-418-01	CHASSIS		375	4-989-491-21	COVER, LENS	
* 363	4-980-385-01	HOLDER (SW)		M201	A-4660-977-A	MOTOR ASSY (TABLE)	

(9) BASE UNIT SECTION
(BU-5BD29AL)



Ref. No.	Part No.	Description	Remark
△ 401	8-820-020-01	OPTICAL PICK-UP KSS-213D/Q-NP	
402	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
403	4-917-567-21	GEAR (M)	
404	4-951-940-01	INSULATOR (BU)	
405	4-917-565-01	SHAFT, SLED	

Ref. No.	Part No.	Description	Remark
406	4-917-564-01	GEAR (P), FLATNESS	
* 407	A-4699-522-A	BD BOARD, COMPLETE	
408	4-951-620-01	SCREW (2.6X8), +BVTP	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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SECTION 8 ELECTRICAL PARTS LIST

AUDIO

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
Some delay should be anticipated when ordering these items.

- SEMICONDUCTORS
In each case, u: μ , for example:
uA. . : μ A. . uPA. . : μ PA. .
uPB. . : μ PB. . uPC. . : μ PC. .
uPD. . : μ PD. .
- CAPACITORS
uF: μ F
- COILS
uH: μ H
- Abbreviation
AR : Argentine
AUS : Australian
CND : Canadian
MX : Mexican

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
*	A-2007-131-A	AUDIO BOARD, COMPLETE					C624	1-130-481-00	MYLAR	0.0068uF	5%		50V
		*****					C625	1-130-481-00	MYLAR	0.0068uF	5%		50V
		(including MOTOR BOARD)					C627	1-124-903-11	ELECT	1uF	20%		50V
							C628	1-136-153-00	FILM	0.01uF	5%		50V
		< CAPACITOR >					C642	1-104-664-11	ELECT	47uF	20%		16V
							C651	1-161-494-00	CERAMIC	0.022uF			25V
C301	1-162-289-31	CERAMIC	390PF	10%	50V								
C302	1-126-968-11	ELECT	100uF	20%	6.3V	< CONNECTOR >							
C303	1-162-282-31	CERAMIC	100PF	10%	50V								
C304	1-130-483-00	MYLAR	0.01uF	5%	50V	* CN601	1-568-864-11	SOCKET, CONNECTOR 21P					
C305	1-107-715-11	ELECT	22uF	20%	16V	* CN602	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P					
						* CN651	1-564-521-11	PLUG, CONNECTOR 6P					
C311	1-162-289-31	CERAMIC	390PF	10%	50V								
C313	1-162-282-31	CERAMIC	100PF	10%	50V	< IC >							
C314	1-130-487-00	MYLAR	0.022uF	5%	50V								
C315	1-126-233-11	ELECT	22uF	20%	25V	IC601	8-759-111-44	IC	uPC4570C-1				
C331	1-137-427-11	FILM	120PF	5%	50V	IC602	8-759-143-54	IC	uPC1330HA				
						IC611	8-759-111-44	IC	uPC4570C-1				
C332	1-162-288-31	CERAMIC	330PF	10%	50V								
C333	1-162-209-31	CERAMIC	27PF	5%	50V	< COIL >							
C401	1-162-289-31	CERAMIC	390PF	10%	50V								
C402	1-126-968-11	ELECT	100uF	20%	6.3V	L331	1-410-780-11	INDUCTOR	27mH				
C403	1-162-282-31	CERAMIC	100PF	10%	50V	L431	1-410-780-11	INDUCTOR	27mH				
C404	1-130-483-00	MYLAR	0.01uF	5%	50V	< TRANSISTOR >							
C405	1-107-715-11	ELECT	22uF	20%	16V								
C411	1-162-289-31	CERAMIC	390PF	10%	50V	Q621	8-729-142-46	TRANSISTOR	2SC2001-LK				
C413	1-162-282-31	CERAMIC	100PF	10%	50V	Q622	8-729-142-46	TRANSISTOR	2SC2001-LK				
C414	1-130-487-00	MYLAR	0.022uF	5%	50V	Q623	8-729-801-93	TRANSISTOR	2SD1387				
						Q651	8-729-900-65	TRANSISTOR	DTA144ES				
C415	1-126-233-11	ELECT	22uF	20%	25V								
C431	1-137-427-11	FILM	120PF	5%	50V	< RESISTOR >							
C432	1-162-288-31	CERAMIC	330PF	10%	50V								
C433	1-162-209-31	CERAMIC	27PF	5%	50V	R301	1-247-881-00	CARBON	120K	5%		1/4W	
C601	1-104-396-11	ELECT	10uF	20%	16V	R302	1-249-409-11	CARBON	220	5%		1/4W	
						R303	1-249-433-11	CARBON	22K	5%		1/4W	
C602	1-104-396-11	ELECT	10uF	20%	16V	R304	1-247-889-00	CARBON	270K	5%		1/4W	
C611	1-124-907-11	ELECT	10uF	20%	50V	R305	1-247-858-11	CARBON	13K	5%		1/4W	
C612	1-124-907-11	ELECT	10uF	20%	50V								
C621	1-137-150-11	FILM	0.01uF	5%	100V	R311	1-247-881-00	CARBON	120K	5%		1/4W	
C622	1-126-961-11	ELECT	2.2uF	20%	50V	R312	1-247-807-31	CARBON	100	5%		1/4W	
						R314	1-247-882-11	CARBON	130K	5%		1/4W	
C623	1-136-155-00	FILM	0.015uF	5%	50V	R315	1-247-850-11	CARBON	6.2K	5%		1/4W	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R331	1-249-430-11	CARBON	12K	5%	1/4W						
R401	1-247-881-00	CARBON	120K	5%	1/4W						
R402	1-249-409-11	CARBON	220	5%	1/4W						
R403	1-249-433-11	CARBON	22K	5%	1/4W						
R404	1-247-889-00	CARBON	270K	5%	1/4W						
R405	1-247-858-11	CARBON	13K	5%	1/4W						
R411	1-247-881-00	CARBON	120K	5%	1/4W						
R412	1-247-807-31	CARBON	100	5%	1/4W						
R414	1-247-882-11	CARBON	130K	5%	1/4W						
R415	1-247-850-11	CARBON	6.2K	5%	1/4W						
R431	1-249-430-11	CARBON	12K	5%	1/4W						
R601	1-249-409-11	CARBON	220	5%	1/4W						
R602	1-249-409-11	CARBON	220	5%	1/4W						
R608	1-249-409-11	CARBON	220	5%	1/4W						
R609	1-249-433-11	CARBON	22K	5%	1/4W						
R611	1-249-409-11	CARBON	220	5%	1/4W						
R612	1-249-409-11	CARBON	220	5%	1/4W						
△R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W	F					
△R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W	F					
R623	1-249-432-11	CARBON	18K	5%	1/4W						
R624	1-249-432-11	CARBON	18K	5%	1/4W						
R625	1-249-429-11	CARBON	10K	5%	1/4W						
R651	1-247-856-00	CARBON	11K	5%	1/4W						
R652	1-247-856-00	CARBON	11K	5%	1/4W						
R653	1-249-441-11	CARBON	100K	5%	1/4W						
< VARIABLE RESISTOR >											
RV301	1-238-598-11	RES, ADJ, CARBON 2.2K									
RV311	1-238-598-11	RES, ADJ, CARBON 2.2K									
RV341	1-238-551-11	RES, ADJ, CARBON 220K									
RV401	1-238-598-11	RES, ADJ, CARBON 2.2K									
RV411	1-238-598-11	RES, ADJ, CARBON 2.2K									
RV441	1-238-551-11	RES, ADJ, CARBON 220K									
RV651	1-238-599-11	RES, ADJ, CARBON 4.7K									
RV652	1-238-599-11	RES, ADJ, CARBON 4.7K									
< TRANSFORMER >											
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION									

*	A-4699-522-A	BD BOARD, COMPLETE									

< CAPACITOR >											
C101	1-126-607-11	ELECT CHIP	47uF	20%	4V						
C102	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V						
C103	1-164-346-11	CERAMIC CHIP	1uF		16V						
C105	1-163-038-91	CERAMIC CHIP	0.1uF		25V						
C106	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V						
C107	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V						
C108	1-164-232-11	CERAMIC CHIP	0.01uF		50V						
C109	1-164-232-11	CERAMIC CHIP	0.01uF		50V						
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V						
C111	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V						
C112	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V						
C113	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V						
C114	1-164-005-11	CERAMIC CHIP	0.47uF		25V						
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V						
C116	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V						
C117	1-164-005-11	CERAMIC CHIP	0.47uF		25V						
C118	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V						
C119	1-163-038-91	CERAMIC CHIP	0.1uF		25V						
C120	1-124-779-00	ELECT CHIP	10uF	20%	16V						
C121	1-163-038-91	CERAMIC CHIP	0.1uF		25V						
C122	1-164-232-11	CERAMIC CHIP	0.01uF		50V						
C123	1-163-038-91	CERAMIC CHIP	0.1uF		25V						
C124	1-126-607-11	ELECT CHIP	47uF	20%	4V						
C125	1-164-232-11	CERAMIC CHIP	0.01uF		50V						
C126	1-163-038-91	CERAMIC CHIP	0.1uF		25V						
C127	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V						
C128	1-163-135-00	CERAMIC CHIP	560PF	5%	50V						
C129	1-163-038-91	CERAMIC CHIP	0.1uF		25V						
C130	1-164-336-11	CERAMIC CHIP	0.33uF		25V						
C131	1-164-346-11	CERAMIC CHIP	1uF		16V						
C140	1-110-501-11	CERAMIC CHIP	0.33uF		50V						
C154	1-163-235-11	CERAMIC CHIP	22PF	5%	50V						
C161	1-164-005-11	CERAMIC CHIP	0.47uF		25V						
C162	1-164-232-11	CERAMIC CHIP	0.01uF		50V						
C163	1-163-117-00	CERAMIC CHIP	100PF	5%	50V						
C164	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V						
C165	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V						
C166	1-163-137-00	CERAMIC CHIP	680PF	5%	50V						
C167	1-163-121-00	CERAMIC CHIP	150PF	5%	50V						
C168	1-163-137-00	CERAMIC CHIP	680PF	5%	50V						
C169	1-163-121-00	CERAMIC CHIP	150PF	5%	50V						
C170	1-163-099-00	CERAMIC CHIP	18PF	5%	50V						
C171	1-163-237-11	CERAMIC CHIP	27PF	5%	50V						
C173	1-163-038-91	CERAMIC CHIP	0.1uF		25V						
C174	1-163-038-91	CERAMIC CHIP	0.1uF		25V						
C175	1-163-038-91	CERAMIC CHIP	0.1uF		25V						
C176	1-163-038-91	CERAMIC CHIP	0.1uF		25V						
C177	1-163-038-91	CERAMIC CHIP	0.1uF		25V						
C178	1-163-038-91	CERAMIC CHIP	0.1uF		25V						
C179	1-163-038-91	CERAMIC CHIP	0.1uF		25V						
C181	1-126-205-11	ELECT CHIP	47uF	20%	6.3V						
C182	1-126-393-11	ELECT	33uF	20%	10V						
C183	1-124-778-00	ELECT CHIP	22uF	20%	6.3V						

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C185	1-164-232-11	CERAMIC CHIP	0.01uF		50V	R128	1-216-098-00	METAL CHIP	110K	5%	1/10W
C188	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	R129	1-216-025-91	METAL GLAZE	100	5%	1/10W
C189	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	R130	1-216-079-00	METAL CHIP	18K	5%	1/10W
< CONNECTOR >						R131	1-216-079-00	METAL CHIP	18K	5%	1/10W
CNU101	1-770-014-11	CONNECTOR, FFC/FPC 16P				R132	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
CNU101	1-777-937-11	CONNECTOR, FFC/FPC 16P				R133	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
CNU102	1-778-874-11	CONNECTOR, FFC(LIF(NON-ZIF))19P				R134	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
< FERRITE BEAD >						R135	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
FB101	1-414-234-11	INDUCTOR, FERRITE BEAD				R136	1-216-073-00	METAL CHIP	10K	5%	1/10W
FB103	1-414-234-11	INDUCTOR, FERRITE BEAD				R137	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
< IC >						R138	1-216-025-91	METAL GLAZE	100	5%	1/10W
IC101	8-752-080-62	IC CXA1992AR				R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
IC102	8-759-429-32	IC BA5941FP-E2				R157	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
IC103	8-752-378-66	IC CXD2519Q				R158	1-216-001-00	METAL CHIP	10	5%	1/10W
< JUMPER RESISTOR >						R159	1-216-121-91	METAL GLAZE	1M	5%	1/10W
JW101	1-216-295-91	CONDUCTOR, CHIP		(2012)		R161	1-216-097-91	METAL GLAZE	100K	5%	1/10W
JW104	1-216-295-91	CONDUCTOR, CHIP		(2012)		R162	1-216-073-00	METAL CHIP	10K	5%	1/10W
< TRANSISTOR >						R163	1-216-121-91	METAL GLAZE	1M	5%	1/10W
Q101	8-729-010-08	TRANSISTOR	MSB710-R			R164	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
< RESISTOR >						R165	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R102	1-216-001-00	METAL CHIP	10	5%	1/10W	R166	1-216-073-00	METAL CHIP	10K	5%	1/10W
R104	1-216-093-00	METAL CHIP	68K	5%	1/10W	R167	1-216-081-00	METAL CHIP	22K	5%	1/10W
R105	1-216-088-00	METAL CHIP	43K	5%	1/10W	R168	1-216-073-00	METAL CHIP	10K	5%	1/10W
R106	1-216-088-00	METAL CHIP	43K	5%	1/10W	R169	1-216-079-00	METAL CHIP	18K	5%	1/10W
R107	1-216-088-00	METAL CHIP	43K	5%	1/10W	R170	1-216-081-00	METAL CHIP	22K	5%	1/10W
R108	1-216-088-00	METAL CHIP	43K	5%	1/10W	R171	1-216-073-00	METAL CHIP	10K	5%	1/10W
R109	1-216-093-00	METAL CHIP	68K	5%	1/10W	R172	1-216-079-00	METAL CHIP	18K	5%	1/10W
R114	1-216-101-00	METAL CHIP	150K	5%	1/10W	R173	1-216-025-91	METAL GLAZE	100	5%	1/10W
R115	1-216-101-00	METAL CHIP	150K	5%	1/10W	R174	1-216-033-00	METAL CHIP	220	5%	1/10W
R116	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	R175	1-216-025-91	METAL GLAZE	100	5%	1/10W
R117	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	R176	1-216-025-91	METAL GLAZE	100	5%	1/10W
R118	1-216-063-91	METAL CHIP	3.9K	5%	1/10W	R177	1-216-025-91	METAL GLAZE	100	5%	1/10W
R119	1-216-085-00	METAL CHIP	33K	5%	1/10W	R178	1-216-025-91	METAL GLAZE	100	5%	1/10W
R120	1-216-089-91	METAL GLAZE	47K	5%	1/10W	R179	1-216-025-91	METAL GLAZE	100	5%	1/10W
R121	1-216-114-00	METAL GLAZE	510K	5%	1/10W	R180	1-216-025-91	METAL GLAZE	100	5%	1/10W
R122	1-216-097-91	METAL GLAZE	100K	5%	1/10W	R181	1-216-025-91	METAL GLAZE	100	5%	1/10W
R123	1-216-099-00	METAL CHIP	120K	5%	1/10W	R188	1-216-037-00	METAL CHIP	330	5%	1/10W
R124	1-216-091-00	METAL CHIP	56K	5%	1/10W	R190	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R125	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	R191	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R126	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	< SWITCH >					
R127	1-216-089-91	METAL GLAZE	47K	5%	1/10W	S101	1-572-085-11	SWITCH, LEAF			
< VIBRATOR >						< VIBRATOR >					
						X101	1-767-408-21	VIBRATOR, CRYSTAL (16.9344MHz)			

BD LED

CD MOTOR

CD-A SW

CD-B1 SW

Ref. No.	Part No.	Description	Remark
*	1-659-059-13	BD LED BOARD *****	
		< DIODE >	
D201	8-719-032-98	DIODE SEL5820A	
		< TRANSISTOR >	
Q201	8-729-119-78	TRANSISTOR 2SC403SP-51	
		< RESISTOR >	
R201	1-247-863-91	CARBON 22K 5% 1/4W	
R202	1-249-411-11	CARBON 330 5% 1/4W	
R203	1-249-437-11	CARBON 47K 5% 1/4W	

*	A-4673-765-A	CD MOTOR BOARD, COMPLETE *****	
		< CAPACITOR >	
C201	1-124-907-11	ELECT 10uF 20% 50V	
C202	1-164-159-21	CERAMIC 0.1uF 50V	
C203	1-124-907-11	ELECT 10uF 20% 50V	
		< CONNECTOR >	
* CN201	1-568-947-11	PIN, CONNECTOR 9P	
		< IC >	
IC201	8-759-365-94	IC TA8409S	
		< COIL >	
L201	1-408-117-00	INDUCTOR 10uH	
		< RESISTOR >	
R205	1-249-427-11	CARBON 6.8K 5% 1/4W	
R206	1-249-425-11	CARBON 4.7K 5% 1/4W	
		< SWITCH >	
S201	1-762-587-11	SWITCH, PUSH (1 KEY)	

*	1-664-009-11	CD-A SW BOARD *****	
		< CONNECTOR >	
* CN642	1-568-943-11	PIN, CONNECTOR 5P	

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D641	8-719-058-04	DIODE SEL5223S-TP15 (NON-STOP)	
		< RESISTOR >	
R731	1-247-843-11	CARBON 3.3K 5% 1/4W	
R732	1-249-425-11	CARBON 4.7K 5% 1/4W	
R733	1-249-427-11	CARBON 6.8K 5% 1/4W	
R734	1-249-429-11	CARBON 10K 5% 1/4W	
R735	1-249-432-11	CARBON 18K 5% 1/4W	
R736	1-249-436-11	CARBON 39K 5% 1/4W	
R737	1-247-881-00	CARBON 120K 5% 1/4W	
R741	1-247-807-31	CARBON 100 5% 1/4W	
		< SWITCH >	
S661	1-554-303-21	SWITCH, TACTILE (DISC 1)	
S662	1-554-303-21	SWITCH, TACTILE (DISC 2)	
S663	1-554-303-21	SWITCH, TACTILE (DISC 3)	
S664	1-554-303-21	SWITCH, TACTILE (DISC 4)	
S665	1-554-303-21	SWITCH, TACTILE (DISC 5)	
S666	1-554-303-21	SWITCH, TACTILE (FLASH)	
S667	1-554-303-21	SWITCH, TACTILE (NON-STOP)	
S668	1-554-303-21	SWITCH, TACTILE (LOOP)	

*	1-664-010-11	CD-B1 SW BOARD *****	
		< DIODE >	
D645	8-719-058-03	DIODE SEL5423E-TP15 (▷ CD PLAY)	
D646	8-719-057-97	DIODE SEL5923A-TP15 (■ PAUSE)	
D647	8-719-058-03	DIODE SEL5423E-TP15 (▷ CD PLAY)	
		< RESISTOR >	
R745	1-249-419-11	CARBON 1.5K 5% 1/4W	
R746	1-249-421-11	CARBON 2.2K 5% 1/4W	
R747	1-247-843-11	CARBON 3.3K 5% 1/4W	
R748	1-249-425-11	CARBON 4.7K 5% 1/4W	
R749	1-247-807-31	CARBON 100 5% 1/4W	
R750	1-247-807-31	CARBON 100 5% 1/4W	
R751	1-247-807-31	CARBON 100 5% 1/4W	
		< SWITCH >	
S676	1-554-303-21	SWITCH, TACTILE (▷)	
S677	1-554-303-21	SWITCH, TACTILE (■)	
S678	1-554-303-21	SWITCH, TACTILE (■)	
S679	1-554-303-21	SWITCH, TACTILE (DISC SKIP)	

CD-B2 SW

DOOR SW

HEADPHONE-MIC

LEAF SWITCH

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
*	1-664-011-11	CD-B2 SW BOARD *****					C776	1-162-294-31	CERAMIC	0.001uF	10%	50V	
							C794	1-164-159-21	CERAMIC	0.1uF		50V	
							C795	1-164-159-21	CERAMIC	0.1uF		50V	
		< RESISTOR >							< CONNECTOR >				
R752	1-249-427-11	CARBON	6.8K	5%	1/4W		* CN701	1-568-935-11	PIN, CONNECTOR 8P				
R753	1-249-429-11	CARBON	10K	5%	1/4W				< IC >				
R754	1-249-432-11	CARBON	18K	5%	1/4W		IC760	8-759-634-51	IC M5218AP				
R755	1-249-436-11	CARBON	39K	5%	1/4W				< JACK >				
R756	1-247-881-00	CARBON	120K	5%	1/4W		J760	1-770-226-11	JACK (LARGE TYPE) (PHONES)				
		< SWITCH >					J761	1-770-226-11	JACK (LARGE TYPE) (MIC)				
S681	1-554-303-21	SWITCH, TACTILE (▷▷)							< RESISTOR >				
S682	1-554-303-21	SWITCH, TACTILE (REPEAT)					R760	1-249-429-11	CARBON	10K	5%	1/4W	
S683	1-554-303-21	SWITCH, TACTILE (PLAY MODE)					R761	1-249-417-11	CARBON	1K	5%	1/4W	
S684	1-554-303-21	SWITCH, TACTILE (1/ALL DISCS)					R764	1-249-441-11	CARBON	100K	5%	1/4W	
S685	1-554-303-21	SWITCH, TACTILE (EDIT)					R765	1-249-417-11	CARBON	1K	5%	1/4W	
S686	1-554-303-21	SWITCH, TACTILE (<◁)					R766	1-247-863-91	CARBON	22K	5%	1/4W	
S711	1-467-968-11	ENCODER, ROTARY (◁◁ AMS ▷▷)					R767	1-249-429-11	CARBON	10K	5%	1/4W	
*****							R769	1-247-885-00	CARBON	180K	5%	1/4W	
*	1-664-016-11	DOOR SW BOARD *****					R770	1-247-807-31	CARBON	100	5%	1/4W	
		< CAPACITOR >							< VARIABLE RESISTOR >				
C691	1-164-159-21	CERAMIC	0.1uF		50V		RV760	1-225-366-11	RES, VAR, CARBON 50K				
		< CONNECTOR >					*****						
CN661	1-506-481-11	PIN, CONNECTOR 2P					*	1-650-669-11	LEAF SWITCH BOARD *****				
		< SWITCH >							< CONNECTOR >				
S691	1-771-057-11	SWITCH (▲ OPEN)					* CN1001	1-568-854-11	SOCKET, CONNECTOR 11P				
*****									< TRANSISTOR >				
*	A-4392-452-A	HEADPONE-MIC BOARD, COMPLETE *****					Q1001	8-749-010-90	TRANSISTOR PHOTO REFLECTOR NJL5165KA-H				
		< CAPACITOR >					Q1002	8-749-010-90	TRANSISTOR PHOTO REFLECTOR NJL5165KA-H				
C760	1-162-306-11	CERAMIC	0.01uF	20%	16V				< RESISTOR >				
C761	1-126-961-11	ELECT	2.2uF	20%	50V		R1001	1-247-818-11	CARBON	300	5%	1/4W	
C764	1-162-294-31	CERAMIC	0.001uF	10%	50V		R1002	1-247-820-11	CARBON	360	5%	1/4W	
C765	1-162-215-31	CERAMIC	47PF	5%	50V		R1003	1-249-414-11	CARBON	560	5%	1/4W	
C766	1-162-290-31	CERAMIC	470PF	10%	50V		R1004	1-247-834-11	CARBON	1.3K	5%	1/4W	
C767	1-162-215-31	CERAMIC	47PF	5%	50V		R1005	1-247-818-11	CARBON	300	5%	1/4W	
C769	1-162-282-31	CERAMIC	100PF	10%	50V				< SWITCH >				
C770	1-126-961-11	ELECT	2.2uF	20%	50V		S1001	1-692-832-11	SWITCH, PUSH (1 KEY) (A PLAY)				
C771	1-126-959-11	ELECT	0.47uF	20%	50V		S1002	1-692-832-11	SWITCH, PUSH (1 KEY) (B PLAY)				
C773	1-126-964-11	ELECT	10uF	20%	50V								
C774	1-126-964-11	ELECT	10uF	20%	50V								
C775	1-162-294-31	CERAMIC	0.001uF	10%	50V								

LEAF SWITCH

LED

MAIN

Ref. No.	Part No.	Description	Remark
S1004	1-571-281-21	SWITCH, LEAF (A HALF)	
S1005	1-571-281-21	SWITCH, LEAF (A CrO2)	
S1006	1-572-248-21	SWITCH, LEAF (REC A)	
S1007	1-572-248-21	SWITCH, LEAF (B HALF)	
S1008	1-571-281-21	SWITCH, LEAF (REC B)	
S1009	1-571-281-21	SWITCH, LEAF (B CrO2)	

*	1-664-017-11	LED BOARD	

		< CONNECTOR >	
CN671	1-506-481-11	PIN, CONNECTOR 2P	
		< DIODE >	
D671	8-719-058-03	DIODE SEL5423E-TP15	
D672	8-719-058-03	DIODE SEL5423E-TP15	
D673	8-719-058-03	DIODE SEL5423E-TP15	
D674	8-719-058-03	DIODE SEL5423E-TP15	
		< RESISTOR >	
R791	1-249-412-11	CARBON 390 5% 1/4W	

*	A-4392-474-A	MAIN BOARD, COMPLETE (US, CND)	
*	A-4392-479-A	MAIN BOARD, COMPLETE (E, AR, MX)	
*	A-4392-709-A	MAIN BOARD, COMPLETE (AUS, PX)	

	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
*	4-870-539-11	PLATE, GROUND	
		< CAPACITOR >	
C102	1-162-282-31	CERAMIC 100PF 10% 50V	
C103	1-162-282-31	CERAMIC 100PF 10% 50V	
C104	1-126-962-11	ELECT 3.3uF 20% 50V	
C105	1-162-600-11	CERAMIC 0.0047uF 30% 16V	
C106	1-162-301-11	CERAMIC 0.0015uF 30% 16V	
C107	1-126-956-91	ELECT 0.1uF 20% 50V	
C121	1-162-286-21	CERAMIC 220PF 10% 50V	
C123	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C152	1-162-282-31	CERAMIC 100PF 10% 50V	
C153	1-162-282-31	CERAMIC 100PF 10% 50V	
C154	1-126-962-11	ELECT 3.3uF 20% 50V	
C155	1-162-600-11	CERAMIC 0.0047uF 30% 16V	
C156	1-162-301-11	CERAMIC 0.0015uF 30% 16V	
C157	1-126-956-91	ELECT 0.1uF 20% 50V	
C171	1-162-286-21	CERAMIC 220PF 10% 50V	
C173	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C201	1-136-169-00	FILM 0.22uF 5% 50V	

Ref. No.	Part No.	Description	Remark
C202	1-136-169-00	FILM 0.22uF 5% 50V	
C203	1-130-493-00	MYLAR 0.068uF 5% 50V	
C204	1-130-493-00	MYLAR 0.068uF 5% 50V	
C205	1-130-486-00	MYLAR 0.018uF 10% 50V	
C206	1-130-486-00	MYLAR 0.018uF 10% 50V	
C207	1-130-480-00	MYLAR 0.0056uF 5% 50V	
C208	1-130-479-00	MYLAR 0.0047uF 5% 50V	
C209	1-130-474-00	MYLAR 0.0018uF 5% 50V	
C210	1-126-964-11	ELECT 10uF 20% 50V	
C211	1-126-964-11	ELECT 10uF 20% 50V	
C212	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C213	1-136-169-00	FILM 0.22uF 5% 50V	
C214	1-136-169-00	FILM 0.22uF 5% 50V	
C215	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C216	1-136-167-00	FILM 0.15uF 5% 50V	
C221	1-126-967-11	ELECT 47uF 20% 10V	
C222	1-126-967-11	ELECT 47uF 20% 10V	
C223	1-126-964-11	ELECT 10uF 20% 50V	
C224	1-162-290-31	CERAMIC 470PF 10% 50V	
C226	1-126-964-11	ELECT 10uF 20% 50V	
C227	1-164-159-21	CERAMIC 0.1uF 50V	
C231	1-126-960-11	ELECT 1uF 20% 50V	
C251	1-136-169-00	FILM 0.22uF 5% 50V	
C252	1-136-169-00	FILM 0.22uF 5% 50V	
C253	1-130-493-00	MYLAR 0.068uF 5% 50V	
C254	1-130-493-00	MYLAR 0.068uF 5% 50V	
C255	1-130-486-00	MYLAR 0.018uF 10% 50V	
C256	1-130-486-00	MYLAR 0.018uF 10% 50V	
C257	1-130-480-00	MYLAR 0.0056uF 5% 50V	
C258	1-130-479-00	MYLAR 0.0047uF 5% 50V	
C259	1-130-474-00	MYLAR 0.0018uF 5% 50V	
C260	1-126-964-11	ELECT 10uF 20% 50V	
C261	1-126-964-11	ELECT 10uF 20% 50V	
C262	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C263	1-136-169-00	FILM 0.22uF 5% 50V	
C264	1-136-169-00	FILM 0.22uF 5% 50V	
C276	1-126-964-11	ELECT 10uF 20% 50V	
C281	1-126-933-11	ELECT 100uF 20% 10V	
C282	1-126-961-11	ELECT 2.2uF 20% 50V	
C283	1-126-933-11	ELECT 100uF 20% 10V	
C284	1-126-923-11	ELECT 220uF 20% 10V	
C291	1-126-959-11	ELECT 0.47uF 20% 50V	
C301	1-126-965-11	ELECT 22uF 20% 50V	
C302	1-164-159-21	CERAMIC 0.1uF 50V	
C303	1-136-165-00	FILM 0.1uF 5% 50V	
C304	1-126-926-11	ELECT 1000uF 20% 10V	
C305	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C309	1-102-514-11	CERAMIC 22PF 5% 50V	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark
C310	1-102-514-11	CERAMIC	22PF	5%	50V			< CONNECTOR >	
C311	1-164-159-21	CERAMIC	0.1uF		50V				
C315	1-126-933-11	ELECT	100uF	20%	10V	CN101	1-778-982-11	CONNECTOR, BOARD TO BOARD 13P	
C390	1-126-933-11	ELECT	100uF	20%	10V	* CN102	1-568-836-11	SOCKET, CONNECTOR 17P	
C393	1-126-925-11	ELECT	470uF	20%	10V	* CN201	1-568-832-11	SOCKET, CONNECTOR 13P	
						CN202	1-568-802-11	SOCKET, CONNECTOR 19P	
C394	1-164-159-21	CERAMIC	0.1uF		50V	* CN203	1-568-936-11	PIN, CONNECTOR 9P	
C396	1-126-961-11	ELECT	2.2uF	20%	50V				
C398	1-126-961-11	ELECT	2.2uF	20%	50V	CN205	1-568-838-11	SOCKET, CONNECTOR 21P	
C903	1-136-165-00	FILM	0.1uF	5%	50V	* CN206	1-568-830-11	SOCKET, CONNECTOR 11P	
C904	1-126-937-11	ELECT	4700uF	20%	16V	* CN207	1-568-449-11	HOUSING, CONNECTOR(PC BOARD)3P	
								< DIODE >	
C906	1-126-933-11	ELECT	100uF	20%	10V	D141	8-719-987-63	DIODE 1N4148M	
C909	1-126-964-11	ELECT	10uF	20%	50V	D281	8-719-815-85	DIODE 1S1585 (US, CND)	
C910	1-126-933-11	ELECT	100uF	20%	10V	D281	8-719-987-63	DIODE 1N4148M (EXCEPT US, CND)	
C911	1-126-964-11	ELECT	10uF	20%	50V	D291	8-719-987-63	DIODE 1N4148M	
C912	1-126-916-11	ELECT	1000uF	20%	6.3V	D301	8-719-200-82	DIODE 11ES2	
C913	1-126-943-11	ELECT	2200uF	20%	25V	D302	8-719-200-82	DIODE 11ES2	
C914	1-126-952-11	ELECT	1000uF	20%	16V	D303	8-719-987-63	DIODE 1N4148M	
C915	1-126-967-11	ELECT	47uF	20%	16V	D304	8-719-987-63	DIODE 1N4148M	
C916	1-164-159-21	CERAMIC	0.1uF		50V	D305	8-719-987-63	DIODE 1N4148M	
C917	1-126-968-11	ELECT	100uF	20%	50V	D306	8-719-987-63	DIODE 1N4148M	
C918	1-126-968-11	ELECT	100uF	20%	50V	D307	8-719-987-63	DIODE 1N4148M	
C919	1-126-964-11	ELECT	10uF	20%	50V	D309	8-719-987-63	DIODE 1N4148M	
C920	1-126-947-11	ELECT	47uF	20%	35V	D902	8-719-200-82	DIODE 11ES2	
C953	1-136-165-00	FILM	0.1uF	5%	50V	D903	8-719-200-82	DIODE 11ES2	
C954	1-126-768-11	ELECT	2200uF	20%	16V	D904	8-719-200-82	DIODE 11ES2	
C956	1-126-933-11	ELECT	100uF	20%	10V	D905	8-719-200-82	DIODE 11ES2	
C1501	1-130-479-00	MYLAR	0.0047uF	5%	50V	D906	8-719-200-82	DIODE 11ES2	
C1502	1-162-290-31	CERAMIC	470PF	10%	50V	D907	8-719-200-82	DIODE 11ES2	
C1503	1-164-159-21	CERAMIC	0.1uF		50V	D908	8-719-200-82	DIODE 11ES2	
C1504	1-126-960-11	ELECT	1uF	20%	50V	D909	8-719-200-82	DIODE 11ES2	
C1505	1-126-964-11	ELECT	10uF	20%	50V	D910	8-719-002-60	DIODE UZL-33L-TA	
C1506	1-126-964-11	ELECT	10uF	20%	50V	D911	8-719-011-47	DIODE UZ-3.3BSB-TA	
C1507	1-126-960-11	ELECT	1uF	20%	50V	D912	8-719-987-63	DIODE 1N4148M	
C1508	1-126-933-11	ELECT	100uF	20%	10V	D913	8-719-200-82	DIODE 11ES2	
C1521	1-126-964-11	ELECT	10uF	20%	50V	D914	8-719-200-82	DIODE 11ES2	
C1522	1-126-964-11	ELECT	10uF	20%	50V	D915	8-719-001-43	DIODE UZL-11M1-TA	
C1523	1-126-933-11	ELECT	100uF	20%	16V	D951	8-719-987-63	DIODE 1N4148M	
C1531	1-164-159-21	CERAMIC	0.1uF		50V	D952	8-719-987-63	DIODE 1N4148M	
C1532	1-164-159-21	CERAMIC	0.1uF		50V			< FERRITE BEAD >	
C1533	1-164-159-21	CERAMIC	0.1uF		50V	FB302	1-412-473-21	INDUCTOR (SMALL)	
								< IC >	
C1534	1-126-935-11	ELECT	470uF	20%	16V	IC101	8-759-634-50	IC M5218AL	
C1551	1-130-479-00	MYLAR	0.0047uF	5%	50V	IC102	8-759-000-48	IC MC14052BCP	
C1552	1-162-290-31	CERAMIC	470PF	10%	50V	IC201	8-759-331-39	IC M62427FP	
C1553	1-164-159-21	CERAMIC	0.1uF		50V	IC231	8-759-634-50	IC M5218AL	
C1554	1-126-960-11	ELECT	1uF	20%	50V				
C1555	1-126-964-11	ELECT	10uF	20%	50V				
C1556	1-126-964-11	ELECT	10uF	20%	50V				
C1557	1-126-960-11	ELECT	1uF	20%	50V				
C1558	1-126-933-11	ELECT	100uF	20%	10V				

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
IC281	8-759-111-68	IC uPC1237HA		< RESISTOR >			
IC301	8-759-459-31	IC uPD780018YGF-013-3BA		R102	1-249-417-11	CARBON 1K 5%	1/4W
IC302	8-759-635-63	IC M51943BSL		R103	1-249-437-11	CARBON 47K 5%	1/4W
IC901	8-759-288-53	IC LA5617		R104	1-249-417-11	CARBON 1K 5%	1/4W
IC902	8-759-604-86	IC M5F7807L		R105	1-247-897-11	CARBON 560K 5%	1/4W
IC903	8-759-231-53	IC TA7805S		R106	1-249-437-11	CARBON 47K 5%	1/4W
IC904	8-759-231-58	IC TA7812S		R107	1-249-417-11	CARBON 1K 5%	1/4W
IC1501	8-759-363-21	IC HA12203NT		R108	1-249-441-11	CARBON 100K 5%	1/4W
IC1502	8-759-822-09	IC LB1641		R121	1-249-424-11	CARBON 3.9K 5%	1/4W
< JACK >				R122	1-247-887-00	CARBON 220K 5%	1/4W
J101	1-695-188-31	JACK, PIN 4P (PHONO, VIDEO IN)		R133	1-260-091-11	CARBON 220 5%	1/2W
< COIL >				R134	1-260-091-11	CARBON 220 5%	1/2W
L301	1-410-509-11	INDUCTOR 10uH		R140	1-249-429-11	CARBON 10K 5%	1/4W
L393	1-410-515-11	INDUCTOR 33uH		R141	1-249-437-11	CARBON 47K 5%	1/4W
< TRANSISTOR >				R142	1-249-429-11	CARBON 10K 5%	1/4W
Q141	8-729-140-82	TRANSISTOR 2SA988-PAFAEA (US, CND)		△R147	1-215-893-11	METAL OXIDE 1.5K 5%	2W F (US,CND)
Q141	8-729-119-76	TRANSISTOR 2SA1175-HFE (EXCEPT US, CND)		△R147	1-216-456-00	METAL OXIDE 820 5%	2W F (EXCEPT US, CND)
Q142	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA (US, CND)		R152	1-249-417-11	CARBON 1K 5%	1/4W
Q142	8-729-119-78	TRANSISTOR 2SC403SP-51 (EXCEPT US, CND)		R153	1-249-437-11	CARBON 47K 5%	1/4W
Q201	8-729-900-36	TRANSISTOR DTC124ES		R154	1-249-417-11	CARBON 1K 5%	1/4W
Q202	8-729-119-78	TRANSISTOR 2SC403SP-51		R155	1-247-897-11	CARBON 560K 5%	1/4W
Q203	8-729-119-78	TRANSISTOR 2SC403SP-51		R156	1-249-437-11	CARBON 47K 5%	1/4W
Q204	8-729-141-30	TRANSISTOR 2SC3623A-LK		R157	1-249-417-11	CARBON 1K 5%	1/4W
Q231	8-729-900-63	TRANSISTOR DTA124ES		R158	1-249-441-11	CARBON 100K 5%	1/4W
Q232	8-729-900-63	TRANSISTOR DTA124ES		R171	1-249-424-11	CARBON 3.9K 5%	1/4W
Q251	8-729-900-36	TRANSISTOR DTC124ES		R172	1-247-887-00	CARBON 220K 5%	1/4W
Q252	8-729-119-78	TRANSISTOR 2SC403SP-51		R183	1-260-091-11	CARBON 220 5%	1/2W
Q253	8-729-119-78	TRANSISTOR 2SC403SP-51		R184	1-260-091-11	CARBON 220 5%	1/2W
Q254	8-729-141-30	TRANSISTOR 2SC3623A-LK		R201	1-249-429-11	CARBON 10K 5%	1/4W
Q281	8-729-900-36	TRANSISTOR DTC124ES		R202	1-247-863-91	CARBON 22K 5%	1/4W
Q282	8-729-900-63	TRANSISTOR DTA124ES		R203	1-249-441-11	CARBON 100K 5%	1/4W
Q283	8-729-900-36	TRANSISTOR DTC124ES		R205	1-247-863-91	CARBON 22K 5%	1/4W
Q301	8-729-119-78	TRANSISTOR 2SC403SP-51		R206	1-249-421-11	CARBON 2.2K 5%	1/4W
Q901	8-729-040-20	TRANSISTOR RT1P137L-TP		R207	1-249-431-11	CARBON 15K 5%	1/4W
Q902	8-729-900-36	TRANSISTOR DTC124ES		R209	1-249-441-11	CARBON 100K 5%	1/4W
Q903	8-729-030-18	TRANSISTOR 2SD2525		R210	1-247-891-00	CARBON 330K 5%	1/4W
Q904	8-729-030-19	TRANSISTOR 2SB1640		R211	1-249-441-11	CARBON 100K 5%	1/4W
Q905	8-729-040-20	TRANSISTOR RT1P137L-TP		R212	1-249-411-11	CARBON 330 5%	1/4W
Q906	8-729-900-63	TRANSISTOR DTA124ES		R213	1-249-429-11	CARBON 10K 5%	1/4W
Q907	8-729-119-78	TRANSISTOR 2SC403SP-51		R214	1-249-437-11	CARBON 47K 5%	1/4W
Q1531	8-729-801-93	TRANSISTOR 2SD1387		R215	1-247-903-00	CARBON 1M 5%	1/4W
Q1532	8-729-900-80	TRANSISTOR DTC114ES		R216	1-249-429-11	CARBON 10K 5%	1/4W
Q1533	8-729-900-80	TRANSISTOR DTC114ES		R217	1-249-437-11	CARBON 47K 5%	1/4W
Q1534	8-729-119-77	TRANSISTOR 2SA1175-FEK		R221	1-249-425-11	CARBON 4.7K 5%	1/4W
Q1535	8-729-900-80	TRANSISTOR DTC114ES		R222	1-249-425-11	CARBON 4.7K 5%	1/4W
				R226	1-249-421-11	CARBON 2.2K 5%	1/4W

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R227	1-249-441-11	CARBON	100K	5%	1/4W	R316	1-249-429-11	CARBON	10K	5%	1/4W
R228	1-249-429-11	CARBON	10K	5%	1/4W	R318	1-249-429-11	CARBON	10K	5%	1/4W
R231	1-249-437-11	CARBON	47K	5%	1/4W	R319	1-249-429-11	CARBON	10K	5%	1/4W
R232	1-249-437-11	CARBON	47K	5%	1/4W	R320	1-249-429-11	CARBON	10K	5%	1/4W
R234	1-247-886-11	CARBON	200K	5%	1/4W						
						R325	1-249-427-11	CARBON	6.8K	5%	1/4W (E, AR, MX)
R235	1-249-421-11	CARBON	2.2K	5%	1/4W	R325	1-249-425-11	CARBON	4.7K	5%	1/4W (AUS, PX)
R236	1-249-441-11	CARBON	100K	5%	1/4W						
R253	1-249-441-11	CARBON	100K	5%	1/4W	R326	1-249-425-11	CARBON	4.7K	5%	1/4W (E, AR, MX)
R257	1-249-431-11	CARBON	15K	5%	1/4W	R326	1-249-427-11	CARBON	6.8K	5%	1/4W (AUS, PX)
R259	1-249-441-11	CARBON	100K	5%	1/4W						
						R327	1-247-807-31	CARBON	100	5%	1/4W
R260	1-247-891-00	CARBON	330K	5%	1/4W						
R261	1-249-441-11	CARBON	100K	5%	1/4W	R328	1-247-807-31	CARBON	100	5%	1/4W
R262	1-249-411-11	CARBON	330	5%	1/4W	R330	1-247-807-31	CARBON	100	5%	1/4W
R263	1-249-429-11	CARBON	10K	5%	1/4W	R331	1-247-807-31	CARBON	100	5%	1/4W
R264	1-249-437-11	CARBON	47K	5%	1/4W	R332	1-247-807-31	CARBON	100	5%	1/4W
						R333	1-247-807-31	CARBON	100	5%	1/4W
R265	1-247-903-00	CARBON	1M	5%	1/4W						
R266	1-249-429-11	CARBON	10K	5%	1/4W	R339	1-247-807-31	CARBON	100	5%	1/4W
R267	1-249-437-11	CARBON	47K	5%	1/4W	R340	1-247-807-31	CARBON	100	5%	1/4W
R271	1-249-425-11	CARBON	4.7K	5%	1/4W	R341	1-247-807-31	CARBON	100	5%	1/4W
R272	1-249-425-11	CARBON	4.7K	5%	1/4W	R342	1-247-807-31	CARBON	100	5%	1/4W
						R343	1-247-807-31	CARBON	100	5%	1/4W
R276	1-249-421-11	CARBON	2.2K	5%	1/4W						
R277	1-249-441-11	CARBON	100K	5%	1/4W	R344	1-247-807-31	CARBON	100	5%	1/4W
R278	1-249-429-11	CARBON	10K	5%	1/4W	R345	1-247-807-31	CARBON	100	5%	1/4W
R281	1-249-429-11	CARBON	10K	5%	1/4W (US, CND)	R346	1-247-807-31	CARBON	100	5%	1/4W
R281	1-249-425-11	CARBON	4.7K	5%	1/4W (EXCEPT US, CND)	R349	1-247-807-31	CARBON	100	5%	1/4W
						R350	1-247-807-31	CARBON	100	5%	1/4W
R282	1-249-429-11	CARBON	10K	5%	1/4W (US, CND)						
R282	1-249-425-11	CARBON	4.7K	5%	1/4W (EXCEPT US, CND)	R351	1-247-807-31	CARBON	100	5%	1/4W
						R352	1-247-807-31	CARBON	100	5%	1/4W
R283	1-249-435-11	CARBON	33K	5%	1/4W	R353	1-247-807-31	CARBON	100	5%	1/4W
R284	1-247-791-91	CARBON	22	5%	1/4W	R354	1-247-807-31	CARBON	100	5%	1/4W
R285	1-249-441-11	CARBON	100K	5%	1/4W	R355	1-247-807-31	CARBON	100	5%	1/4W
R286	1-249-429-11	CARBON	10K	5%	1/4W	R356	1-247-807-31	CARBON	100	5%	1/4W
R287	1-249-429-11	CARBON	10K	5%	1/4W (US, CND)	R357	1-247-807-31	CARBON	100	5%	1/4W
R287	1-249-427-11	CARBON	6.8K	5%	1/4W (EXCEPT US, CND)	R359	1-247-807-31	CARBON	100	5%	1/4W
						R360	1-247-807-31	CARBON	100	5%	1/4W
R288	1-249-438-11	CARBON	56K	5%	1/4W	R366	1-247-807-31	CARBON	100	5%	1/4W
R289	1-249-437-11	CARBON	47K	5%	1/4W						
						R367	1-249-429-11	CARBON	10K	5%	1/4W
R291	1-247-863-91	CARBON	22K	5%	1/4W	R368	1-247-843-11	CARBON	3.3K	5%	1/4W
R292	1-247-863-91	CARBON	22K	5%	1/4W	R369	1-249-429-11	CARBON	10K	5%	1/4W
R293	1-249-417-11	CARBON	1K	5%	1/4W	R381	1-247-807-31	CARBON	100	5%	1/4W
R294	1-249-441-11	CARBON	100K	5%	1/4W	R384	1-249-429-11	CARBON	10K	5%	1/4W
R295	1-247-903-00	CARBON	1M	5%	1/4W						
						R395	1-247-807-31	CARBON	100	5%	1/4W
R301	1-249-417-11	CARBON	1K	5%	1/4W	R396	1-249-435-11	CARBON	33K	5%	1/4W
R302	1-249-429-11	CARBON	10K	5%	1/4W	R397	1-247-807-31	CARBON	100	5%	1/4W
R303	1-249-437-11	CARBON	47K	5%	1/4W	R398	1-249-435-11	CARBON	33K	5%	1/4W
R304	1-249-437-11	CARBON	47K	5%	1/4W	R417	1-249-441-11	CARBON	100K	5%	1/4W
R305	1-249-429-11	CARBON	10K	5%	1/4W						
						R913	1-247-815-91	CARBON	220	5%	1/4W
R313	1-247-807-31	CARBON	100	5%	1/4W	R914	1-249-417-11	CARBON	1K	5%	1/4W
						R915	1-249-425-11	CARBON	4.7K	5%	1/4W
						R916	1-247-815-91	CARBON	220	5%	1/4W

MAIN

PANEL

Ref. No.	Part No.	Description	Remark		
R917	1-247-815-91	CARBON	220	5%	1/4W
R918	1-249-425-11	CARBON	4.7K	5%	1/4W
R920	1-249-417-11	CARBON	1K	5%	1/4W
R921	1-247-895-91	CARBON	470K	5%	1/4W
R951	1-249-425-11	CARBON	4.7K	5%	1/4W
R952	1-249-425-11	CARBON	4.7K	5%	1/4W
R1501	1-249-435-11	CARBON	33K	5%	1/4W
R1502	1-249-417-11	CARBON	1K	5%	1/4W
R1503	1-249-426-11	CARBON	5.6K	5%	1/4W
R1504	1-247-840-00	CARBON	2.4K	5%	1/4W
R1505	1-247-863-91	CARBON	22K	5%	1/4W
R1506	1-249-421-11	CARBON	2.2K	5%	1/4W
R1507	1-249-428-11	CARBON	8.2K	5%	1/4W
R1521	1-249-430-11	CARBON	12K	5%	1/4W
R1522	1-249-426-11	CARBON	5.6K	5%	1/4W
R1524	1-249-429-11	CARBON	10K	5%	1/4W
R1525	1-249-432-11	CARBON	18K	5%	1/4W
R1526	1-249-429-11	CARBON	10K	5%	1/4W
R1527	1-249-429-11	CARBON	10K	5%	1/4W
R1531	1-247-843-11	CARBON	3.3K	5%	1/4W
R1532	1-249-411-11	CARBON	330	5%	1/4W
R1533	1-249-427-11	CARBON	6.8K	5%	1/4W
R1534	1-249-429-11	CARBON	10K	5%	1/4W
R1535	1-249-425-11	CARBON	4.7K	5%	1/4W
R1536	1-249-425-11	CARBON	4.7K	5%	1/4W
R1541	1-249-425-11	CARBON	4.7K	5%	1/4W
R1542	1-249-425-11	CARBON	4.7K	5%	1/4W
R1543	1-249-425-11	CARBON	4.7K	5%	1/4W
R1544	1-249-417-11	CARBON	1K	5%	1/4W
R1545	1-249-437-11	CARBON	47K	5%	1/4W
R1546	1-249-437-11	CARBON	47K	5%	1/4W
R1547	1-249-437-11	CARBON	47K	5%	1/4W
R1548	1-249-437-11	CARBON	47K	5%	1/4W
R1551	1-247-863-91	CARBON	22K	5%	1/4W
R1552	1-249-417-11	CARBON	1K	5%	1/4W
R1553	1-249-426-11	CARBON	5.6K	5%	1/4W
R1554	1-247-840-00	CARBON	2.4K	5%	1/4W
R1555	1-247-863-91	CARBON	22K	5%	1/4W
R1556	1-249-421-11	CARBON	2.2K	5%	1/4W
R1557	1-249-428-11	CARBON	8.2K	5%	1/4W
< VARIABLE RESISTOR >					
RV1501	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV1551	1-238-598-11	RES, ADJ, CARBON 2.2K			
< RELAY >					
RY141	1-755-141-11	RELAY (US,CND)			
RY141	1-515-920-11	RELAY (24V) (EXCEPT US, CND)			

Ref. No.	Part No.	Description	Remark		
< TERMINAL >					
TM131	1-537-240-31	TERMINAL BOARD (CHECKER PIN)(SPEAKER)			
TM132	1-537-240-31	TERMINAL BOARD (CHECKER PIN) (SURROUND) (US, CND)			
< VIBRATOR >					
X301	1-760-489-11	VIBRATOR, CERAMIC (5MHz)			
X302	1-567-098-41	VIBRATOR, CRYSTAL (32.768MHz)			

*	A-4392-477-A	PANEL BOARD, COMPLETE *****			
*	4-978-168-01	HOLDER, FL TUBE			
< CAPACITOR >					
C601	1-126-967-11	ELECT	47uF	20%	50V
C602	1-162-306-11	CERAMIC	0.01uF	20%	16V
C603	1-126-963-11	ELECT	4.7uF	20%	50V
C604	1-126-960-11	ELECT	1uF	20%	50V
C606	1-126-960-11	ELECT	1uF	20%	50V
C608	1-124-584-00	ELECT	100uF	20%	10V
C610	1-162-306-11	CERAMIC	0.01uF	20%	16V
C611	1-162-306-11	CERAMIC	0.01uF	20%	16V
C621	1-126-957-11	ELECT	0.22uF	20%	50V
C622	1-162-306-11	ELECT	0.01uF	20%	16V
C623	1-124-464-11	ELECT	0.22uF	20%	50V
C624	1-136-159-00	ELECT	0.033uF	20%	50V
C625	1-162-302-11	FILM	2200PF	5%	16V
C626	1-124-464-11	ELECT	0.22uF	20%	50V
C632	1-124-464-11	ELECT	0.22uF	20%	50V
C641	1-162-286-21	CERAMIC	220	10%	50V
C642	1-162-286-21	CERAMIC	220	10%	50V
C643	1-162-286-21	CERAMIC	220	10%	50V
C644	1-162-286-21	CERAMIC	220	10%	50V
C645	1-162-286-21	CERAMIC	220	10%	50V
C646	1-162-286-21	CERAMIC	220	10%	50V
C647	1-162-286-21	CERAMIC	220	10%	50V
C648	1-162-286-21	CERAMIC	220	10%	50V
C649	1-162-286-21	CERAMIC	220	10%	50V
C650	1-162-286-21	CERAMIC	220	10%	50V
C651	1-162-286-21	CERAMIC	220	10%	50V
C652	1-162-286-21	CERAMIC	220	10%	50V
C653	1-162-286-21	CERAMIC	220	10%	50V
C654	1-162-286-21	CERAMIC	220	10%	50V
C655	1-162-286-21	CERAMIC	220	10%	50V
C695	1-164-159-21	CERAMIC	0.1uF		50V
C696	1-164-159-21	CERAMIC	0.1uF		50V
C697	1-162-294-31	CERAMIC	0.001uF	10%	50V
< CONNECTOR >					
* CN601	1-568-836-11	SOCKET, CONNECTOR 17P			

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
CN602	1-506-486-11	PIN, CONNECTOR 7P		Q610	8-729-119-77	TRANSISTOR 2SA1175-FEK	
* CN603	1-568-944-11	PIN, CONNECTOR 6P		Q611	8-729-119-77	TRANSISTOR 2SA1175-FEK	
* CN604	1-568-946-11	PIN, CONNECTOR 8P		Q614	8-729-119-77	TRANSISTOR 2SA1175-FEK	
< DIODE >				Q617	8-729-119-77	TRANSISTOR 2SA1175-FEK	
D601	8-719-987-63	DIODE 1N4148M		Q618	8-729-119-77	TRANSISTOR 2SA1175-FEK	
D602	8-719-987-63	DIODE 1N4148M		Q619	8-729-119-77	TRANSISTOR 2SA1175-FEK	
D606	8-719-987-63	DIODE 1N4148M		Q621	8-729-119-77	TRANSISTOR 2SA1175-FEK	
D607	8-719-987-63	DIODE 1N4148M		< RESISTOR >			
D611	8-719-058-03	DIODE SEL5423E-TP15 (TUNER/BAND)		R601	1-249-415-11	CARBON 680 5%	1/4W
D612	8-719-058-03	DIODE SEL5423E-TP15 (TUNER/BAND)		R602	1-249-431-11	CARBON 15K 5%	1/4W
D613	8-719-058-04	DIODE SEL5223S-TP15 (ENTER/NEXT)		R603	1-247-903-00	CARBON 1M 5%	1/4W
D614	8-719-058-04	DIODE SEL5223S-TP15 (GROOVE)		R608	1-249-429-11	CARBON 10K 5%	1/4W
D615	8-719-058-04	DIODE SEL5223S-TP15 (SUPER WOOFER)		R609	1-247-843-11	CARBON 3.3K 5%	1/4W
D616	8-719-058-04	DIODE SEL5223S-TP15 (EFFECT)		R610	1-247-843-11	CARBON 3.3K 5%	1/4W
D617	8-719-058-04	DIODE SEL5223S-TP15 (ENTER)		R611	1-249-429-11	CARBON 10K 5%	1/4W
D618	8-719-058-04	DIODE SEL5223S-TP15 (FILE 1)		R612	1-249-429-11	CARBON 10K 5%	1/4W
D619	8-719-058-04	DIODE SEL5223S-TP15 (FILE 2)		R613	1-249-401-11	CARBON 47 5%	1/4W
D620	8-719-058-04	DIODE SEL5223S-TP15 (FILE 3)		R614	1-249-429-11	CARBON 10K 5%	1/4W
D621	8-719-058-04	DIODE SEL5223S-TP15 (FILE 4)		R615	1-249-429-11	CARBON 10K 5%	1/4W
D622	8-719-058-04	DIODE SEL5223S-TP15 (FILE 5)		R616	1-249-429-11	CARBON 10K 5%	1/4W
D623	8-719-058-04	DIODE SEL5223S-TP15 (P.FILE)		R617	1-249-429-11	CARBON 10K 5%	1/4W
D624	8-719-058-04	DIODE SEL5223S-TP15 (MENU 2)		R621	1-249-421-11	CARBON 2.2K 5%	1/4W
D625	8-719-058-04	DIODE SEL5223S-TP15 (MENU 1)		R622	1-249-437-11	CARBON 47K 5%	1/4W
< FERRITE BEAD >				R623	1-247-895-91	CARBON 470K 5%	1/4W
FB601	1-412-473-21	INDUCTOR (SMALL TYPE)		R624	1-249-421-11	CARBON 2.2K 5%	1/4W
< FILTER >				R625	1-249-437-11	CARBON 47K 5%	1/4W
FL601	1-517-619-11	INDICATOR TUBE, FLUORESCENT		R626	1-247-895-91	CARBON 470K 5%	1/4W
< COIL >				R633	1-247-897-11	CARBON 560K 5%	1/4W
L601	1-410-509-11	MICRO INDUCTOR 10uH		R634	1-247-897-11	CARBON 560K 5%	1/4W
< IC >				R636	1-249-435-11	CARBON 33K 5%	1/4W
IC601	8-759-446-26	IC TMP87CH74-6544		R637	1-247-895-91	CARBON 470K 5%	1/4W
IC602	8-759-459-84	IC NJL56H400		R641	1-249-427-11	CARBON 6.8K 5%	1/4W
< TRANSISTOR >				R642	1-247-815-91	CARBON 220 5%	1/4W
Q601	8-729-119-78	TRANSISTOR 2SC403SP-51		R643	1-249-410-11	CARBON 270 5%	1/4W
Q602	8-729-118-00	TRANSISTOR 2SB1116-L		R644	1-249-412-11	CARBON 390 5%	1/4W
Q603	8-729-118-00	TRANSISTOR 2SB1116-L		R645	1-249-413-11	CARBON 470 5%	1/4W
Q604	8-729-119-77	TRANSISTOR 2SA1175-FEK		R646	1-249-415-11	CARBON 680 5%	1/4W
Q605	8-729-119-77	TRANSISTOR 2SA1175-FEK		R647	1-249-416-11	CARBON 820 5%	1/4W
Q606	8-729-119-77	TRANSISTOR 2SA1175-FEK		R648	1-249-418-11	CARBON 1.2K 5%	1/4W
Q607	8-729-119-77	TRANSISTOR 2SA1175-FEK		R649	1-249-419-11	CARBON 1.5K 5%	1/4W
Q608	8-729-119-77	TRANSISTOR 2SA1175-FEK		R650	1-249-427-11	CARBON 6.8K 5%	1/4W
Q609	8-729-119-77	TRANSISTOR 2SA1175-FEK		R651	1-247-815-91	CARBON 220 5%	1/4W
				R652	1-249-410-11	CARBON 270 5%	1/4W
				R653	1-249-412-11	CARBON 390 5%	1/4W
				R654	1-249-413-11	CARBON 470 5%	1/4W
				R655	1-249-415-11	CARBON 680 5%	1/4W
				R656	1-249-416-11	CARBON 820 5%	1/4W

PANEL

POWER AMP

Ref. No.	Part No.	Description	Remark		
R657	1-249-418-11	CARBON	1.2K	5%	1/4W
R658	1-249-427-11	CARBON	6.8K	5%	1/4W
R659	1-247-815-91	CARBON	220	5%	1/4W
R660	1-249-410-11	CARBON	270	5%	1/4W
R661	1-249-412-11	CARBON	390	5%	1/4W
R662	1-249-427-11	CARBON	6.8K	5%	1/4W
R663	1-247-815-91	CARBON	220	5%	1/4W
R664	1-249-410-11	CARBON	270	5%	1/4W
R665	1-249-412-11	CARBON	390	5%	1/4W
R666	1-249-413-11	CARBON	470	5%	1/4W
R667	1-249-415-11	CARBON	680	5%	1/4W
R668	1-249-416-11	CARBON	820	5%	1/4W
R669	1-249-418-11	CARBON	1.2K	5%	1/4W
R670	1-249-419-11	CARBON	1.5K	5%	1/4W
R671	1-249-421-11	CARBON	2.2K	5%	1/4W
R672	1-247-843-11	CARBON	3.3K	5%	1/4W
R673	1-249-425-11	CARBON	4.7K	5%	1/4W
R674	1-249-427-11	CARBON	6.8K	5%	1/4W
R675	1-249-429-11	CARBON	10K	5%	1/4W
R676	1-249-432-11	CARBON	18K	5%	1/4W
R677	1-249-436-11	CARBON	39K	5%	1/4W
R681	1-249-429-11	CARBON	10K	5%	1/4W
R682	1-249-421-11	CARBON	2.2K	5%	1/4W
R683	1-247-887-00	CARBON	220K	5%	1/4W
R684	1-249-421-11	CARBON	2.2K	5%	1/4W
R685	1-247-815-91	CARBON	220	5%	1/4W
R686	1-247-807-31	CARBON	100	5%	1/4W
R687	1-247-807-31	CARBON	100	5%	1/4W
R688	1-247-807-31	CARBON	100	5%	1/4W
R689	1-247-807-31	CARBON	100	5%	1/4W
R690	1-247-807-31	CARBON	100	5%	1/4W
R691	1-247-807-31	CARBON	100	5%	1/4W
R692	1-247-807-31	CARBON	100	5%	1/4W
R693	1-247-807-31	CARBON	100	5%	1/4W
R694	1-247-807-31	CARBON	100	5%	1/4W
R695	1-247-807-31	CARBON	100	5%	1/4W
R696	1-247-807-31	CARBON	100	5%	1/4W
R697	1-247-807-31	CARBON	100	5%	1/4W
R698	1-247-807-31	CARBON	100	5%	1/4W
R699	1-247-807-31	CARBON	100	5%	1/4W
R700	1-247-807-31	CARBON	100	5%	1/4W
< SWITCH >					
S601	1-554-303-21	SWITCH, TACTILE (ENTER/NEXT)			
S602	1-554-303-21	SWITCH, TACTILE (TUNER MEMORY)			
S603	1-554-303-21	SWITCH, TACTILE (TUNING MODE)			
S604	1-554-303-21	SWITCH, TACTILE (TUNER/BAND)			
S605	1-554-303-21	SWITCH, TACTILE (TUNING +)			
S606	1-554-303-21	SWITCH, TACTILE (TUNING -)			
S607	1-554-303-21	SWITCH, TACTILE (STEREO/MONO)			
S608	1-554-303-21	SWITCH, TACTILE (FUNCTION)			

Ref. No.	Part No.	Description	Remark		
S609	1-554-303-21	SWITCH, TACTILE (GROOVE)			
S610	1-554-303-21	SWITCH, TACTILE (GEQ Δ)			
S611	1-554-303-21	SWITCH, TACTILE (GEQ <Δ>)			
S612	1-554-303-21	SWITCH, TACTILE (GEQ >Δ>)			
S613	1-554-303-21	SWITCH, TACTILE (GEQ ∇)			
S614	1-554-303-21	SWITCH, TACTILE (SUPER WOOFER)			
S615	1-554-303-21	SWITCH, TACTILE (S/W MODE)			
S616	1-554-303-21	SWITCH, TACTILE (GEQ CONTROL)			
S617	1-554-303-21	SWITCH, TACTILE (ENTER)			
S618	1-554-303-21	SWITCH, TACTILE (EFFECT)			
S619	1-554-303-21	SWITCH, TACTILE (SPECTRUM ANALYZER)			
S620	1-554-303-21	SWITCH, TACTILE (DISPLAY/DEMO)			
S621	1-554-303-21	SWITCH, TACTILE (POWER)			
S622	1-554-303-21	SWITCH, TACTILE (CLOCK SET)			
S623	1-554-303-21	SWITCH, TACTILE (REC)			
S624	1-554-303-21	SWITCH, TACTILE (DAILY 1)			
S625	1-554-303-21	SWITCH, TACTILE (DAILY 2)			
S626	1-554-303-21	SWITCH, TACTILE (SLEEP)			
S628	1-554-303-21	SWITCH, TACTILE (WAVE)			
S629	1-554-303-21	SWITCH, TACTILE (KARAOKE PON/MPX)			
S630	1-554-303-21	SWITCH, TACTILE (SURROUND)			
S631	1-554-303-21	SWITCH, TACTILE (P FILE MEMORY)			
S701	1-473-392-11	ENCODER, ROTARY (VOLUME)			
< VIBRATOR >					
X601	1-579-125-11	VIBRATOR, CERAMIC (8MHz)			

*	A-4392-442-A	POWER AMP BOARD, COMPLETE (US, CND)			
*	A-4392-460-A	POWER AMP BOARD, COMPLETE			
(EXCEPT US, CND)					

< CAPACITOR >					
C801	1-128-582-11	ELECT	10uF	20%	100V
(US, CND)					
C801	1-126-963-11	ELECT	4.7uF	20%	50V
(EXCEPT US, CND)					
C802	1-162-286-21	CERAMIC	220PF	10%	50V
C803	1-162-282-31	CERAMIC	100PF	10%	50V
C804	1-126-967-11	ELECT	47uF	20%	50V
C806	1-126-967-11	ELECT	47uF	20%	50V
C807	1-128-560-11	ELECT	22uF	20%	100V
C809	1-128-560-11	ELECT	22uF	20%	100V
C810	1-164-159-21	CERAMIC	0.1uF		50V
C811	1-130-493-00	MYLAR	0.068uF	5%	50V
C812	1-130-493-00	MYLAR	0.068uF	5%	50V
C814	1-162-306-11	CERAMIC	0.01uF	20%	16V
C841	1-126-933-11	ELECT	100uF	20%	10V
(US, CND)					
C841	1-126-925-11	ELECT	470uF	20%	10V
(EXCEPT US, CND)					

POWER AMP

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
C851	1-128-582-11	ELECT	10uF	20%	100V (US, CND)		R804	1-249-437-11	CARBON	47K	5%	1/4W	
							R805	1-260-107-11	CARBON	4.7K	5%	1/2W (US, CND)	
C851	1-126-963-11	ELECT	4.7uF	20%	50V (EXCEPT US, CND)		R805	1-260-105-11	CARBON	3.3K	5%	1/2W (EXCEPT US, CND)	
C852	1-162-286-21	CERAMIC	220PF	10%	50V								
C853	1-162-282-31	CERAMIC	100PF	10%	50V		R806	1-260-107-11	CARBON	4.7K	5%	1/2W (US, CND)	
C854	1-126-967-11	ELECT	47uF	20%	50V								
C856	1-126-967-11	ELECT	47uF	20%	50V		R806	1-260-105-11	CARBON	3.3K	5%	1/2W (EXCEPT US, CND)	
C857	1-128-560-11	ELECT	22uF	20%	100V		△ R807	1-212-881-11	FUSIBLE	100	5%	1/4W	F
C861	1-130-493-00	MYLAR	0.068uF	5%	50V		△ R808	1-208-601-11	WIREWOUND	0.1	10%	2W	F
C862	1-130-493-00	MYLAR	0.068uF	5%	50V								
C901	1-104-482-11	ELECT	4700uF	20%	63V (US, CND)		R809	1-260-076-11	CARBON	10	5%	1/2W	
							R811	1-249-417-11	CARBON	1K	5%	1/4W	
C901	1-126-974-11	ELECT	3300uF	20%	50V (EXCEPT US, CND)		R812	1-247-863-91	CARBON	22K	5%	1/4W	
							R813	1-249-441-11	CARBON	100K	5%	1/4W	
							R814	1-260-105-11	CARBON	3.3K	5%	1/2W (US, CND)	
C902	1-130-777-00	FILM	0.1uF	10%	100V (US, CND)								
C902	1-136-165-00	FILM	0.1uF	5%	50V (EXCEPT US, CND)		R814	1-260-099-11	CARBON	1K	5%	1/2W (EXCEPT US, CND)	
C951	1-104-482-11	ELECT	4700uF	20%	63V (US, CND)		R816	1-260-105-11	CARBON	3.3K	5%	1/2W (US, CND)	
							R816	1-260-099-11	CARBON	1K	5%	1/2W (EXCEPT US, CND)	
C951	1-126-974-11	ELECT	3300uF	20%	50V (EXCEPT US, CND)		△ R820	1-202-972-61	FUSIBLE	1	5%	1/4W	F
C952	1-130-777-00	FILM	0.1uF	10%	100V (US, CND)		R841	1-249-429-11	CARBON	10K	5%	1/4W	
							R842	1-247-885-00	CARBON	180K	5%	1/4W (US, CND)	
C952	1-136-165-00	FILM	0.1uF	5%	50V (EXCEPT US, CND)		R842	1-247-881-00	CARBON	120K	5%	1/4W (EXCEPT US, CND)	
		< CONNECTOR >					R843	1-247-843-11	CARBON	3.3K	5%	1/4W (US, CND)	
CN801	1-778-981-11	CONNECTOR, BOARD TO BOARD 13P					R843	1-249-421-11	CARBON	2.2K	5%	1/4W (EXCEPT US, CND)	
		< DIODE >					R844	1-249-429-11	CARBON	10K	5%	1/4W	
							R851	1-249-417-11	CARBON	1K	5%	1/4W	
D801	8-719-815-85	DIODE 1S1585					R852	1-249-437-11	CARBON	47K	5%	1/4W	
D841	8-719-987-63	DIODE 1N4148M					R853	1-249-413-11	CARBON	470	5%	1/4W	
D842	8-719-987-63	DIODE 1N4148M					R854	1-249-437-11	CARBON	47K	5%	1/4W	
D851	8-719-815-85	DIODE 1S1585					R855	1-260-107-11	CARBON	4.7K	5%	1/2W (US, CND)	
D901	8-719-510-68	DIODE D5SBA20F01											
		< IC >					R855	1-260-105-11	CARBON	3.3K	5%	1/2W (EXCEPT US, CND)	
IC801	8-749-921-68	IC STK-4231MK2 (US, CND)					R856	1-260-107-11	CARBON	4.7K	5%	1/2W (US, CND)	
IC801	8-749-900-34	IC STK-4182MK2 (EXCEPT US, CND)					R856	1-260-105-11	CARBON	3.3K	5%	1/2W (EXCEPT US, CND)	
		< TRANSISTOR >					△ R857	1-212-881-11	FUSIBLE	100	5%	1/4W	F
Q801	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA					△ R858	1-208-601-11	WIREWOUND	0.1	10%	2W	F
Q851	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA											
		< RESISTOR >					R859	1-260-076-11	CARBON	10	5%	1/2W	
R801	1-249-417-11	CARBON	1K	5%	1/4W		R861	1-249-417-11	CARBON	1K	5%	1/4W	
R802	1-249-437-11	CARBON	47K	5%	1/4W		R862	1-247-863-91	CARBON	22K	5%	1/4W	
R803	1-249-413-11	CARBON	470	5%	1/4W		R863	1-249-441-11	CARBON	100K	5%	1/4W	

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TABLE SENSOR

TC-A SW

TC-B SW

TCB

Ref. No.	Part No.	Description	Remark
*	1-659-058-13	TABLE SENSOR BOARD *****	
*	4-980-385-01	HOLDER (SW) < IC >	
IC202	8-749-924-18	IC PHOTO INTERRUPTER RPI-1391 < RESISTOR >	
R207	1-249-416-11	CARBON 820 5% 1/4W *****	
*	1-664-012-11	TC-A SW BOARD ***** < CONNECTOR >	
* CN612	1-568-943-11	PIN, CONNECTOR 5P < DIODE >	
D631	8-719-057-10	DIODE LNJ301MPUJA (▷)	
D632	8-719-057-10	DIODE LNJ301MPUJA (◁)	
		< RESISTOR >	
R705	1-249-413-11	CARBON 470 5% 1/4W	
R706	1-249-415-11	CARBON 680 5% 1/4W	
R707	1-249-416-11	CARBON 820 5% 1/4W	
R708	1-249-418-11	CARBON 1.2K 5% 1/4W	
R709	1-249-419-11	CARBON 1.5K 5% 1/4W	
R710	1-249-421-11	CARBON 2.2K 5% 1/4W	
R711	1-247-807-31	CARBON 100 5% 1/4W	
R714	1-247-807-31	CARBON 100 5% 1/4W	
		< SWITCH >	
S641	1-554-303-21	SWITCH, TACTILE (▷)	
S642	1-554-303-21	SWITCH, TACTILE (◁)	
S643	1-554-303-21	SWITCH, TACTILE (■)	
S644	1-554-303-21	SWITCH, TACTILE (◀◀)	
S645	1-554-303-21	SWITCH, TACTILE (▶▶)	
S646	1-554-303-21	SWITCH, TACTILE (DOLBY NR)	
S647	1-554-303-21	SWITCH, TACTILE (DIRECTION)	

*	1-664-013-11	TC-B SW BOARD ***** < DIODE >	
D635	8-719-057-10	DIODE LNJ301MPUJA (◁)	
D636	8-719-057-10	DIODE LNJ301MPUJA (▷)	
D637	8-719-058-17	DIODE LNJ401NPYJA (■)	

Ref. No.	Part No.	Description	Remark
D638	8-719-057-09	DIODE LNJ801LPDJA (● REC)	
		< RESISTOR >	
R715	1-249-421-11	CARBON 2.2K 5% 1/4W	
R716	1-247-843-11	CARBON 3.3K 5% 1/4W	
R717	1-249-425-11	CARBON 4.7K 5% 1/4W	
R718	1-249-427-11	CARBON 6.8K 5% 1/4W	
R719	1-249-429-11	CARBON 10K 5% 1/4W	
R720	1-249-432-11	CARBON 18K 5% 1/4W	
R721	1-249-436-11	CARBON 39K 5% 1/4W	
R722	1-247-881-00	CARBON 120K 5% 1/4W	
R724	1-247-807-31	CARBON 100 5% 1/4W	
R725	1-247-807-31	CARBON 100 5% 1/4W	
R727	1-247-807-31	CARBON 100 5% 1/4W	
R728	1-247-807-31	CARBON 100 5% 1/4W	
		< SWITCH >	
S651	1-554-303-21	SWITCH, TACTILE (▷)	
S652	1-554-303-21	SWITCH, TACTILE (◁)	
S653	1-554-303-21	SWITCH, TACTILE (▶▶)	
S654	1-554-303-21	SWITCH, TACTILE (◀◀)	
S655	1-554-303-21	SWITCH, TACTILE (■)	
S656	1-554-303-21	SWITCH, TACTILE (■)	
S657	1-554-303-21	SWITCH, TACTILE (● REC)	
S658	1-554-303-21	SWITCH, TACTILE (H.SPEED DUBB)	
S659	1-554-303-21	SWITCH, TACTILE (CD SYNC)	

*	A-4303-510-A	TCB BOARD, COMPLETE (US, CND)	
*	A-4303-512-A	TCB BOARD, COMPLETE (EXCEPT US, CND) *****	
		< CAPACITOR >	
C1	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C2	1-126-967-11	ELECT 47uF 20% 16V	
C3	1-164-159-21	CAP, CERAMIC 0.1uF 50V	
C5	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C6	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C7	1-101-004-00	CERAMIC 0.01uF 50V	
C8	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C9	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C11	1-164-159-21	CAP, CERAMIC 0.1uF 50V	
C12	1-162-198-31	CERAMIC 8.2PF 10% 50V	
C14	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C21	1-102-514-11	CERAMIC 22PF 5% 50V	
C22	1-164-159-21	CAP, CERAMIC 0.1uF 50V	
C23	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C24	1-126-967-11	ELECT 47uF 20% 16V	
C25	1-162-306-11	CERAMIC 0.01uF 20% 16V	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C26	1-126-964-11	ELECT	10uF	20%	50V			< DIODE >			
C27	1-164-159-21	CAP, CERAMIC	0.1uF		50V						
C28	1-126-961-11	ELECT	2.2uF	20%	50V	D1	8-719-933-33	DIODE UZL-6L1-TA			
C29	1-102-518-11	CERAMIC	33PF	5%	50V	D2	8-719-987-63	DIODE 1N4148M-TA			
C30	1-162-294-31	CERAMIC	0.001uF	10%	50V			< FRONT END >			
C31	1-162-306-11	CERAMIC	0.01uF	20%	16V						
C41	1-126-933-11	ELECT	100uF	20%	10V	FE1	1-233-533-11	ENCAPSULATED COMPONENT			
C42	1-162-306-11	CERAMIC	0.01uF	20%	16V	FE2	1-239-260-11	ENCAPSULATED COMPONENT			
C43	1-126-962-11	ELECT	3.3uF	20%	50V			< IC >			
C44	1-162-306-11	CERAMIC	0.01uF	20%	16V						
C45	1-124-589-11	ELECT	47uF	20%	16V	IC1	8-759-288-54	IC LC72130			
C46	1-162-600-11	CERAMIC	4700PF	30%	16V	IC2	8-759-176-03	IC LA1835			
C47	1-162-294-31	CERAMIC	0.001uF	10%	50V			< IFT >			
C48	1-126-160-11	ELECT	1uF	20%	50V						
C49	1-136-159-00	METALIZED FILM	0.033uF	5%	50V	IFT41	1-409-636-11	TRANSFORMER, IF (CERAMIC FILTER)			
				(EXCEPT US,CND)				< COIL >			
C49	1-136-162-00	METALIZED FILM	0.056uF	5%	50V						
				(US, CND)							
C50	1-136-159-00	METALIZED FILM	0.033uF	5%	50V	L41	1-410-119-11	MICRO INDUCTOR (EL TYPE) 1mH			
				(EXCEPT US,CND)				< FILTER >			
C50	1-136-162-00	METALIZED FILM	0.056uF	5%	50V						
				(US, CND)							
C51	1-162-600-11	CERAMIC	4700PF	30%	16V	LPF41	1-239-845-11	FILTER, LOW PASS			
C52	1-162-600-11	CERAMIC	4700PF	30%	16V	LPF42	1-239-845-11	FILTER, LOW PASS			
C53	1-126-964-11	ELECT	10uF	20%	50V			< TRANSISTOR >			
C54	1-126-157-11	ELECT	10uF	20%	16V						
C55	1-126-964-11	ELECT	10uF	20%	50V	Q1	8-729-230-99	TRANSISTOR 2SC2669OY-TPE4			
C56	1-126-964-11	ELECT	10uF	20%	50V	Q2	8-729-230-99	TRANSISTOR 2SC2669OY-TPE4			
C57	1-164-159-21	CAP, CERAMIC	0.1uF		50V	Q3	8-729-230-99	TRANSISTOR 2SC2669OY-TPE4			
C58	1-162-306-11	CERAMIC	0.01uF	20%	16V	Q4	8-729-230-99	TRANSISTOR 2SC2669OY-TPE4			
C59	1-164-159-21	CAP, CERAMIC	0.1uF		50V	Q5	8-729-422-57	TRANSISTOR BN1A4M-TP			
C61	1-164-159-21	CAP, CERAMIC	0.1uF		50V			< RESISTOR >			
C62	1-126-967-11	ELECT	47uF	20%	16V						
C63	1-164-159-21	CAP, CERAMIC	0.1uF		50V	R1	1-249-401-11	CARBON 47 5% 1/4W			
C64	1-126-959-11	ELECT	0.47uF	20%	50V	R2	1-249-411-11	CARBON 330 5% 1/4W			
C65	1-126-960-11	ELECT	1.0uF	20%	50V	R3	1-249-411-11	CARBON 330 5% 1/4W			
C66	1-126-960-11	ELECT	1.0uF	20%	50V	R5	1-249-411-11	CARBON 330 5% 1/4W			
C67	1-126-964-11	ELECT	10uF	20%	50V	R6	1-247-863-91	CARBON (SMALL) 22K 5% 1/4W			
C68	1-162-306-11	CERAMIC	0.01uF	20%	16V	R7	1-249-411-11	CARBON 330 5% 1/4W			
C69	1-162-306-11	CERAMIC	0.01uF	20%	16V	R8	1-249-411-11	CARBON 330 5% 1/4W			
C70	1-162-306-11	CERAMIC	0.01uF	20%	16V	R9	1-247-863-91	CARBON (SMALL) 22K 5% 1/4W			
C71	1-162-306-11	CERAMIC	0.01uF	20%	16V	R10	1-249-411-11	CARBON 330 5% 1/4W			
C73	1-162-306-11	CERAMIC	0.01uF	20%	16V	R11	1-247-863-91	CARBON (SMALL) 22K 5% 1/4W			
C74	1-126-964-11	ELECT	10uF	20%	50V	R12	1-249-411-11	CARBON 330 5% 1/4W			
		< FILTER >				R13	1-249-411-11	CARBON 330 5% 1/4W			
CF1	1-567-389-11	FILTER, CERAMIC				R14	1-247-863-91	CARBON (SMALL) 22K 5% 1/4W			
CF2	1-567-389-11	FILTER, CERAMIC				R15	1-249-429-11	CARBON 10K 5% 1/4W			
		< CONNECTOR >				R16	1-249-437-11	CARBON 47K 5% 1/4W			
* CN1	1-568-832-11	SOCKET, CONNECTOR 13P				R19	1-249-399-11	CARBON 33 5% 1/4W			
						R21	1-247-807-31	CARBON (SMALL) 100 5% 1/4W			
						R22	1-249-425-11	CARBON 4.7K 5% 1/4W			
						R23	1-249-425-11	CARBON 4.7K 5% 1/4W			
						R24	1-249-425-11	CARBON 4.7K 5% 1/4W			

TCB

TRANS

Ref. No.	Part No.	Description	Remark
R25	1-247-807-31	CARBON (SMALL) 100	5% 1/4W
R26	1-249-411-11	CARBON 330	5% 1/4W
R27	1-249-425-11	CARBON 4.7K	5% 1/4W
R28	1-247-843-11	CARBON (SMALL) 3.3K	5% 1/4W
R29	1-249-417-11	CARBON 1K	5% 1/4W
R30	1-249-417-11	CARBON 1K	5% 1/4W
R31	1-249-417-11	CARBON 1K	5% 1/4W
R32	1-249-417-11	CARBON 1K	5% 1/4W
R33	1-247-807-31	CARBON (SMALL) 100	5% 1/4W
R34	1-249-429-11	CARBON 10K	5% 1/4W
R35	1-249-429-11	CARBON 10K	5% 1/4W
R36	1-249-437-11	CARBON 47K	5% 1/4W
R37	1-249-417-11	CARBON 1K	5% 1/4W
R41	1-249-429-11	CARBON 10K	5% 1/4W
R43	1-247-843-11	CARBON (SMALL) 3.3K	5% 1/4W
R44	1-247-843-11	CARBON (SMALL) 3.3K	5% 1/4W
R46	1-249-442-11	CARBON 510	5% 1/4W
R47	1-249-399-11	CARBON 33	5% 1/4W
R48	1-247-843-11	CARBON (SMALL) 3.3K	5% 1/4W
R49	1-249-393-11	CARBON 10	5% 1/4W
R50	1-249-429-11	CARBON 10K	5% 1/4W
R51	1-249-441-11	CARBON 100K	5% 1/4W
R52	1-249-429-11	CARBON 10K	5% 1/4W
R53	1-249-425-11	CARBON 4.7K	5% 1/4W
R54	1-249-425-11	CARBON 4.7K	5% 1/4W
R99	1-249-399-11	CARBON 33	5% 1/4W
< VARIABLE RESISTOR >			
RV41	1-238-600-11	RES, ADJ, CARBON 10K	
RV42	1-238-601-11	RES, ADJ, CARBON 22K	
< TERMINAL >			
TM1	1-537-238-21	TERMINAL BOARD	
< VIBRATOR >			
X21	1-760-549-11	VIBRATOR, CRYSTAL (4.5MHz)	
X41	1-577-075-11	OSCILLATOR, CERAMIC	
X42	1-760-220-11	FILTER, CERAMIC	
X43	1-527-981-00	FILTER, CERAMIC	

*	1-664-014-11	TRANS BOARD	*****
	1-533-399-31	HOLDER, FUSE	
< CONNECTOR >			
* CN901	1-564-522-11	PLUG, CONNECTOR 7P	
* CN902	1-564-518-11	PLUG, CONNECTOR 3P	
CN903	1-774-108-11	PIN, CONNECTOR (PC BOARD)	

Ref. No.	Part No.	Description	Remark
< POWER CORD >			
△ CNP901	1-558-943-41	CORD, POWER (E, MX, PX)	
△ CNP901	1-575-042-21	CORD, POWER (US, CND)	
△ CNP901	1-575-651-21	CORD, POWER (AR)	
△ CNP901	1-696-845-11	CORD, POWER (AUS)	
< FUSE >			
△ F901	1-532-388-31	FUSE (2A,250V) (E, AR, AUS, PX)	
△ F902	1-532-504-31	FUSE (4A,250V) (E, AR, MX, PX)	
△ F902	1-533-420-11	FUSE, GLASS CYLINDRICAL (DIA.5)(5A,125V)	(US,CND)
< RESISTOR >			
△ R901	1-219-119-81	FUSIBLE 0.1 5% 1/4W	F (US, CND)
△ R901	1-219-120-11	FUSIBLE 0.15 5% 1/4W	F (EXCEPT US, CND)
△ R902	1-219-119-81	FUSIBLE 0.1 5% 1/4W	F (US, CND)
△ R902	1-219-120-11	FUSIBLE 0.15 5% 1/4W	F (EXCEPT US, CND)
△ R903	1-219-119-81	FUSIBLE 0.1 5% 1/4W	F (US, CND)
△ R903	1-219-120-11	FUSIBLE 0.15 5% 1/4W	F (EXCEPT US, CND)
△ R904	1-219-119-81	FUSIBLE 0.1 5% 1/4W	F (US, CND)
△ R904	1-219-120-11	FUSIBLE 0.15 5% 1/4W	F (EXCEPT US, CND)
△ R907	1-202-725-00	SOLID 3.3M 10% 1/2W	(US, CND)
< SWITCH >			
△ S901	1-762-753-11	SWITCH, VOLTAGE SELECTION (VOLTAGE SELECTOR)(E, AR, PX)	
< TRANSFORMER >			
△ T901	1-431-046-11	TRANSFORMER, POWER (US, CND)	
△ T901	1-431-048-11	TRANSFORMER, POWER (EXCEPT US, CND)	

MISCELLANEOUS			

6	1-769-974-11	WIRE (FLAT TYPE) (13 CORE)	
58	1-773-161-11	WIRE (FLAT TYPE) (21 CORE)	
59	1-769-949-11	WIRE (FLAT TYPE) (11 CORE)	
120	1-773-051-11	WIRE (FLAT TYPE) (17 CORE)	
156	1-777-868-11	WIRE (FLAT TYPE) (19 CORE)	
△ 158	1-569-007-11	ADAPTOR, CONVERSION 2P (PX)	
△ 159	1-569-008-11	ADAPTOR, CONVERSION 2P (AR)	

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Ref. No.	Part No.	Description	Remark
357	1-452-538-11	MAGNET	
△ 401	8-820-020-01	OPTICAL PICK-UP KSS-213D/Q-NP	
402	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
△ CNP901	1-558-943-41	CORD, POWER (E, MX, PX)	
△ CNP901	1-575-042-21	CORD, POWER (US, CND)	
△ CNP901	1-575-651-21	CORD, POWER (AR)	
△ CNP901	1-696-845-11	CORD, POWER (AUS)	
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK) (DECK A)	
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE) (DECK B)	
M1	X-3371-223-1	MOTOR ASSY, CAPSTAN	
M2	A-2004-410-A	MOTOR ASSY, DC (TRIGGER)	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M201	A-4660-977-A	MOTOR ASSY (TABLE)	
△ T901	1-431-046-11	TRANSFORMER, POWER (US, CND)	
△ T901	1-431-048-11	TRANSFORMER, POWER (EXCEPT US, CND)	

HARDWARE LIST			

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	
#3	7-685-872-09	SCREW +BVTT 3X8 (S)	
#4	7-685-650-79	SCREW +BVTP 3X16 TYPE2 N-S	
#5	7-685-862-09	SCREW +BVTT 2.6X6 (S)	
#6	7-685-131-19	SCREW +BTP 2.6X4 TYPE2 N-S	
#7	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#8	7-621-775-10	SCREW +B 2.6X4	
#9	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#10	7-623-921-01	RING, RETAINING, CAPSTAN	
#11	7-621-775-00	SCREW +B 2.6X3	
#12	7-621-255-15	SCREW +P 2X3	

ACCESSORIES & PACKING MATERIALS			

	1-501-374-11	ANTENNA, LOOP	
	1-501-659-41	ANTENNA (FM)	
	3-859-536-11	MANUAL, INSTRUCTION (ENGLISH)	
	3-859-536-21	MANUAL, INSTRUCTION (FRENCH) (CND)	
	3-859-536-31	MANUAL, INSTRUCTION (FRENCH, SPANISH)	
		(E, AR, MX, PX)	
	3-859-536-41	MANUAL, INSTRUCTION (CHINESE) (PX)	
*	4-987-613-01	INDIVIDUAL CARTON (US)	
*	4-987-615-01	INDIVIDUAL CARTON (AUS)	
	8-917-581-90	REMOCON, SONY RM-SD70//M SET	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

